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Psychological Abstracts

CONTENTS

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PSYCHOLOGICAL ABSTRACTS

VOL. II, NO. 1 JANUARY, 1928

GENERAL

1. **Bishop, H. G. An improved heat grill.** *Amer. J. Psychol.*, 1927, **38**, 648–649.—A heat grill is described which permits of simultaneous stimulation of the skin by warm and cold water, or by either separately, with mechanical control of the contact of the grill with the skin.—*G. J. Rich* (Institute for Juvenile Research).

2. **Boring, E. G. Edward Bradford Titchener, 1867–1927.** *Amer. J. Psychol.*, 1927, **38**, 489–506.—The influence of Wundt can be traced throughout Titchener's professional life. Not only was his psychological system derived from this source, but in addition many personal attitudes and ideals were, in effect, conscious or unconscious emulation of Wundt. In recent years Titchener withdrew from contact with the academic world and raised definite barriers between himself and the remainder of American psychology.—*G. J. Rich* (Institute for Juvenile Research).

3. **Brown, W. Proceedings of the sixth annual meeting of the Western Psychological Association at Mills College, Oakland, California, June 18 and 19, 1926.** *Psychol. Bull.*, 1927, **24**, 313–315.—*J. F. Dashiell* (North Carolina).

4. **Calkins, M. W. The self in recent psychology.** *Psychol. Bull.*, 1927, **24**, 205–215.—(A review of literature since 1919.) Among recent writers in general psychology are to be found indirect supporters of the self-psychology, notably Stern, McDougall, and Koffka; and the arguments to be found urged against it are restatements of old difficulties: that "self" adds nothing to the treatment of psychological facts, or that it is a metaphysical concept and is foreign to science. Experimental studies relevant to the problem of self include two (by Wheeler and by Amen) that purport to exhibit no consciousness of self in acts of choosing; but these studies can nevertheless be shown to bear evidence for a self-experience when this is not improperly defined as an elemental experience. On the other hand, the experimental works of Aveling, of Spearman, and of Martin disclose a self-activity or self-assertive tendency as present in choice.—*J. F. Dashiell* (North Carolina).

5. **Chou, S. K. Trends in Chinese psychological interest since 1922.** *Amer. J. Psychol.*, 1927, **38**, 487–488.—The writer tries to show objectively the trends in Chinese psychological interest since the initial publication of the *Chinese Journal of Psychology* in 1922 by the Chinese Psychological Society by listing the articles which have appeared therein. Some 110 articles were listed, which fall into the following classifications: abnormal, 9; adolescence, 4; aesthetics, 1; applied, 3; animal, 7; biography, 2; business, 1; child, 7; educational, 10; experimental, 3; general, 27; heredity, 1; history, 5; intelligence tests, 12; psychological terms, 1; psychological tests, 2; religion, 1; senile, 1; social, 6; systematic, 5; and vocational, 2.—*Siegen K. Chou* (Stanford).

6. **Chou, S. K. The present status of psychology in China.** *Amer. J. Psychol.*, 1927, **38**, 664–666.—The outstanding psychological development in China has been the "T B C F Scale System." Lists are given of the principal journals, psychologists, and universities teaching psychology in China.—*G. J. Rich* (Institute for Juvenile Research).

7. **de Saint-Prix, —. La conscience comme principe spirituel. Conséquence de fait et de droit pour la psychologie humaine.** (Consciousness as a spiritual principle. Importance of fact and right for human psychology.)

Paris: Alcan, 1927. Pp. 234.—Consciousness is divided into two streams: (1) the will to knowledge, which tries to integrate the universality of science, art, and love with the spiritual *élan* of consciousness; (2) the will to power, which uses this effort of integration as an instrument for serving the self. The author believes the solution lies in seeking optimism in a partial negation of the interiority of consciousness, which at least permits a partial realization of consciousness. No bibliography.—*Math. H. Piéron* (Sorbonne).

8. **Dunne, J. W. An experiment with time.** New York: Macmillan, 1927. Pp. 208.—The contents of this volume consist essentially in a presentation of the results of the observation of dream phenomena, particularly of those which seemed to be displaced in time. Dreams do occur which are associated with future events. The explanation for such occurrences rests upon our concept of time. An attempt is made to get at the heart of the problem by an examination of the theory of time as a fourth dimension. The concept of "serialism" is advanced. This notion is shown to be not incompatible with the relativity theory and the newer physics; neither is the conception of a "soul" necessarily out of harmony with the dictates of modern physiology.—*F. A. Geldard* (Clark).

9. **Ewald, G. Verstehen und Erklären.** (Understanding and explaining.) *Zsch. f. Psychol.*, 1927, **103**, 228–241.—Ewald starts from some methodological questions concerning "explanatory" and "understanding" psychology. He is interested in the practical importance of a psychology of "understanding." From this standpoint he rejects Binswanger's method of "understanding," which benefits by Husserl's phenomenological analysis, but finds Spranger's type psychology of considerable value. Nevertheless, Spranger's psychology has many defects which are brought out by the author. In general, the methods both of "explanatory" scientific psychology and the psychology of "understanding" have definite limitations. "Understanding" and "explaining" must supplement each other.—*H. Klüver* (Columbia).

10. **Fernberger, S. W. Psychologies of 1925.** *Psychol. Bull.*, 1927, **24**, 240–242.—A review of lectures under this title by Watson, Hunter, Woodworth, Koffka, Köhler, Prince, Dunlap, and Bentley.—*J. F. Dashiell* (North Carolina).

11. **Gemelli, A. Il mio contributo alla filosofia neoscolastica.** (My contribution to neoscholastic philosophy.) *Pubbl. Univ. Cattol. Milano*, 1926, Serie I, **8**. Pp. 84.—Gemelli's contribution to neoscholastic philosophy was the promotion of neoscholasticism in Italy by the establishment of philosophical reviews and a publishing concern for the publication of neoscholastic works, and, finally, by founding the Catholic University of the Sacred Heart at Milan, where he and his faculty carry on scientific research with the purpose of disproving materialistic science and reconciling science with Catholicism.—*R. Schwarz* (George Washington University).

12. **Gemelli, A. G. B. Vico: Volume commemorativo del secondo centenario della publicazione della "Scienza Nuova" (1725–1925).** (G. B. Vico: A volume commemorative of the second centenary of the publication of the "New Science".) *Pubbl. Univ. Cattol. Milano*, 1926, Serie I, **10**. Pp. 206.—A symposium of articles written by various members of the faculty of the Catholic University of the Sacred Heart at Milan on Vico's life and philosophy, paying special tribute to him as one of the founders of the philosophy of history and as a precursor of folk psychology.—*R. Schwarz* (George Washington University).

13. **Ginzburg, B. Psychology.** *New Int. Year Book*, 1926, 626–629.—News of meetings held during the year, summary of progress made in the fields of general, experimental, comparative and animal, educational, applied, abnormal and social psychology, mental tests, with bibliographies of recent literature in all these fields. The author summarizes Bentley's presidential address to the American Psychological Association and points out that a large number of articles, most of them weak, attempting to reconcile the different points of view in psy-

chology, have appeared during the year. There have also appeared indications "of the critical spirit with regard to statistical findings." The article also contains brief summaries of the polemic between Hunter and Carr on the reliability of maze experiments, Thurstone's attack on the concept of mental age, and reviews of some of the more important recent books on abnormal and social psychology.—*M. Meenes* (Lehigh).

14. **Johnson, C. A. A simple, dependable and portable knee-jerk apparatus for use on higher mammals and man.** *Amer. J. Physiol.*, 1927, **82**, 75–83.—Description, with diagrams, of a knee-jerk apparatus. Detailed statement of the requirements which a satisfactory apparatus of this kind must meet. There is also a clear statement of details of technique in regard to the use of it.—*M. J. Zigler* (Wellesley).

15. **Koppelmann, W. Ist die Arithmetik ein logisch korrektes Lehrgebäude?** (Is arithmetic a logically correct system?) *Ann. d. Phil.*, 1927, **6**, 28–53.—Arithmetic cannot be viewed as a logically correct system. This result is based on a logical analysis of the use of fractions, irrational and imaginary numbers, infinite number, zero and Cantor's *Mengenlehre*. Many mathematical definitions are nothing but arbitrary conventions which from the epistemological point of view are by no means harmless.—*H. Klüver* (Columbia).

16. **Leary, D. B. That mind of yours: a psychological analysis.** Philadelphia: Lippincott, 1927. Pp. 226. $1.75.—A non-technical survey of the whole field of general psychology. It is dedicated to the Man in the Street, and is written for the purpose of interesting him in undertaking the study of modern psychological trends. It is a smooth-running narrative, avoiding any suggestion of the text book. Since the breadth of the subject necessarily limits detail, the reader is referred to a descriptive bibliography for additional information on any point about which his interest has been aroused. There are two main divisions of the material: "The normal human being" and "The field of the Abnormal." The first presents the modern conceptions of sensation, instinct, and so forth, always using illustrations to make these abstractions clear to one having no previous familiarity with the terms. The second division is chiefly devoted to an exposition and evaluation of psychoanalysis. The final chapter discusses the psychological aspects of art and religion, and of psychology itself. The idea emphasized throughout is that the new psychology is a point of view which sees man as a unit and tries to understand him for the sake of educating, curing, and developing him; in contrast to the old "piecemeal" attitude which was largely concerned merely with describing him.—*M. P. Montgomery* (Minnesota).

17. **Lifschitz, F. Über das Problem der Wiederholung der Erscheinungen.** (On the problem of recurrence of phenomena.) *Arch. f. Phil. u. Soziol., II. Abt.*, 1927, **30**, 66–75.—Since it is always assumed that cultural sciences deal with "meaningful" and "singular" events the methodological question arises whether or not there is a recurrence of historical phenomena. Lifschitz answers this question in the affirmative. The historian is able to establish causal connections, since historical phenomena recur. Historical "laws" are possible.—*H. Klüver* (Columbia).

18. **Lillie, R. S. Physical indeterminism and vital action.** *Science*, 1927, **66**, 139–144.—In ultramicroscopic physical phenomena, the principles of external determination and invariable predictability do not hold, and there is physical indetermination or freedom of action. Vital processes are essentially microscopic or ultramicroscopic in their ultimate nature. Moreover, the irritability of protoplasm is such that microscopic changes are propagated throughout the organism and become macroscopic. The older physical concepts of determinism may not prove applicable to the phenomena now known, and it may be necessary to admit the existence of new determining factors indistinguishable in essence from those which formerly we called free.—*G. J. Rich* (Institute for Juvenile Research).

19. **Lodge, O. Science and human progress.** New York: Doran, 1927. Pp. 243. $2.00.—Given a single comprehensive universe, its interpretation, tentatively and temporarily, must recognize duality between mind and matter. Both constitute reality, the truth of which is the ultimate aim of science, although full and absolute truth lies beyond our grasp. Faith, not credulity, must be our guiding light in increasing the boundary of knowledge; perceptivity must go far beyond reason and reason should not deny that which has not yet come within its scope. Mind acts on matter through the ether, which will always be our spiritual abode; hence life will not merely begin and end in nonentity but will survive and progress until the mind of Christ will be realized and supreme. —*R. B. Dow* (Clark).

20. **Meyer, M. F. The most recent textbooks of psychology.** *Psychol. Bull.*, 1927, **24**, 359–377.—A review is made of books by Bentley, Carr, Edgell, Gates, Gault and Howard, Perrin and Klein, and Robinson.—*J. F. Dashiell* (North Carolina).

21. **Miltner, C. C. Moral science: mind and man.** *New Scholas.*, 1927, 1, 163–170.—Recent discussions of social and moral questions show dissatisfaction with the methods and assumptions of moral science. The cause of much of this difficulty may be traced to the exaggerated dualism of Descartes. As developed by later philosophers, this has led to the belief that real knowledge concerning the world or God is impossible, while recent developments in science have also contributed to this disintegrating tendency.—*J. P. Hylan* (Stoneham, Mass.).

22. **Ruckmick, C. A. Some suggestions in laboratory apparatus.** *Amer. J. Psychol.*, 1927, **38**, 647–648.—Ruckmick describes a Sanford chronoscope with electrical release and a stylus maze suitable for use in laboratory exercises.—*G. J. Rich* (Institute for Juvenile Research).

23. **Warren, H. C. Edward Bradford Titchener.** *Science*, 1927, **66**, 208–209.—An obituary and appreciation.—*G. J. Rich* (Institute for Juvenile Research).

24. **Wideman, W. C. Some suggestions regarding the construction of apparatus and tests.** *Amer. J. Psychol.*, 1927, **38**, 650.—The frequent use of toys, pictures, and household specialties in apparatus and tests makes their later duplication difficult and expensive in many cases, as the articles are often novelties which are taken off the market after a brief sale.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstracts 40, 48, 176.]

SENSATION AND PERCEPTION

25. **Berry, W. Color sequences in the after-image of white light.** *Amer. J. Psychol.*, 1927, **38**, 584–596.—The after-image of a bright light contains areas which are variously colored and which exhibit color changes in the course of the duration of the image. The central area, corresponding in form with that of the primary stimulus, was studied in detail. There were marked individual differences with respect to the specific colors in the sequences, their relative frequency of appearance, and the duration of the sequences. As the image waned the character of the flight of colors changed. In the main, the colors changed more rapidly than in the initial stages of the image. There were numerous cases of 2-component recurrent color cycles, which amounted to a rhythm of oscillation between the two colors.—*G. J. Rich* (Institute for Juvenile Research).

26. **Bocksch, H. Duplizitätstheorie und Farbenkonstanz.** (Duplicity theory and color constancy.) *Zsch. f. Psychol.*, 1927, **102**, 338–449.—A variation of Hering's photometer experiment (*Grundzüge der Lehre vom Lichtsinn*, 1905, p. 15) brought out that: (1) "constancy" of colors exists only to a slight extent;

(2) in general, the appearance of colors is determined by physical light conditions and by the laws of peripheral contrast; (3) in "abnormal" illumination there is hardly any constancy of colors; homogeneous illumination banishes it entirely. The experiments with colors in colored illumination showed that: (1) in illumination with comparatively homogeneous light, subjective color changes leading to color constancy do not take place; (2) colors in colored illumination change their phenomenal appearance, they lose more or less their "surface" character; (3) a color in an illumination which has the same hue as this color as well as neutral colors in colored illumination show certain phenomena of *Aufweissung*. The investigation of neutral colors in neutral illumination led to the following results: (1) pure brightness (*Nurhelligkeit*) and pure color (*Nurfarbigkeit*) must be distinguished from *Weisslichkeit* (gray-qualities); (2) pure brightness and pure color depend on physical light conditions; (3) the gray-qualities depend on the relation between the brightness of an object, the intensity of the reflected rays, and the general brightness in space; (4) with respect to gray-qualities, we cannot speak of a *Farbmaterie* either in a physiological or in a physical sense; (5) the ordinary color sensations are, in a certain sense, mixed sensations; (6) there is within certain limits a constancy of gray-qualities; (7) this gray-constancy holds not only for the different phenomenal appearances of colors, but also for surface colors; (8) brightness and *Weisslichkeit* are not identical, the former being dependent on physical intensity; (9) the loosening of surface colors is brought about by homogeneous light. In addition the author reports on a number of experiments concerning the problem of gray-constancy. It is maintained that, in daylight as well as in twilight vision, it is possible to perceive brightness and gray-quality of an object separately. The findings are interpreted on the basis of Bühler's new duplicity-theory. Special attention should be called to the discussion of the "constancy of color-names".—*H. Klüver* (Columbia).

27. **Brues, A. M. The fusion of non-musical intervals.** *Amer. J. Psychol.*, 1927, **38**, 624–638.—The most non-musical intervals are as well fused as the most musical intervals, including the perfect fifth. Fusion is not all dependent upon simplicity of vibration ratio, nor is it dependent upon the pleasantness of the combination, but the degree of fusion may determine the pleasantness. A fusion is a configuration, and as such is the resultant of the interplay of various aspects of the interval.—*G. J. Rich* (Institute for Juvenile Research).

28. **Dolansky, V., & François, M. Contribution à l'étude du sens des obstacles. Le sens des obstacles est-il d'origine acoustique?** (A contribution to the study of the sense for obstacles. Has the sense for obstacles an acoustic origin?) *C. r. Soc. biol.*, 1927, **97**, 471–473.—How do well-adapted blind persons come to perceive at a short distance the existence of obstacles? Three hypotheses have already been proposed: sensations of warmth, sensations of pressure, and sensations of hearing. The authors have undertaken a series of experiments on some blind and on some clear-visioned subjects in order to see which hypothesis was the best. They believe they are able to say that the acoustic or vibratory sense does not enter into account in the production of the sensation of obstacles, although in this sensation the ear plays an almost exclusive rôle for certain subjects.—*Math. H. Piéron* (Sorbonne).

29. **François, M., & Piéron, H. De la nature du phénomène d'adaptation en matière de sensibilité thermique.** (On the nature of the phenomenon of adaptation in matters of thermal sensitivity.) *C. r. Soc. biol.*, 1927, **97**, 562–564.—For an explanation of adaptation in matters of thermal sensitivity (the realization of a state of indifference in the course of a stimulus either cold or hot), various authors have allied themselves either with the idea of nervous fatigue or with that of change of neutrality of the physiological zero of Hering, above and below which are experienced warmth and cold. François and Piéron

have studied adaptation to cold by means of the circulation of water in a rubber armlet which encircles the wrist, and they have at the same time modified the conditions of the interior temperature by using the diathermal process. They have been able to support the validity of Weber's conception according to which adaptation ought to result from a stable equilibrium admitting no more variations of temperature from the level of the receptor apparatus. The fact stands out in these experiments that neither the level of cutaneous temperature nor the time of action for a given stimulus is in constant relation with the state of adaptation. The latter is exclusively linked with the realization of a cutaneous thermal equilibrium, together with stabilization of the temperature at the level of the receptor apparatus, whatever may be the conditions of realizing this equilibrium.—*Math. H. Piéron* (Sorbonne).

30. **Friedmann, P. Die Raumschwelle der Haut beim Kinde.** (The cutaneous spatial threshold in children.) *Zsch. f. Psychol.*, 1927, **103**, 185–202.—Some of Czermak's experiments on the two-point threshold were repeated on 48 normal and 48 subnormal children, age 10–15 years. Since Spearman's esthesiometer was found unsatisfactory in experiments with younger children, a special apparatus was constructed. In normal children there was a decrease in spatial sensitivity up to the age of 12 years. After the twelfth year there was an increase. It is concluded that this increase is more dependent on intellectual than on anatomico-physiological factors. In abnormal children spatial sensitivity seemed to increase with mental age.—*H. Klüver* (Columbia).

31. **Galli, A. Ricerche sperimentali sull' infuenza del punto di fissazione sul fenomeno stroboscopico.** (Experimental investigations into the influence of the fixation point on the stroboscopic phenomenon.) *Pubbl. Univ. Cattol. Milano*, 1925, Serie I, **1**, fasc. iv: 203–424.—The author investigated the effect upon the perception of stroboscopic motion when this motion is verified on a meridian outside the one on which is located the point of fixation. For this purpose it was necessary to examine first motion in ordinary or central vision, then in lateral vision. In the first case he found that with increasing distance between the two stimuli or luminous points there was a decrease in the frequency of perception of motion, and that this frequency increased with increasing velocity or frequency of successions. In the second case he found that lateral fixation increased the number of cases in which motion is perceived and hence facilitates the perception of motion with regard to the central fixation, the distance of the central point, as well as the amplitude of the motion, being of negligible importance. This improvement brought about by lateral vision is noted in different periodicities or rapidities of succession.—*R. Schwarz* (George Washington University).

32. **Gatti, A. Nuove ricerche sopra l'apprezzamento del centro nelle figure piane geometriche.** (New investigations into the estimate of the center of plane geometric figures.) *Pubbl. Univ. Cattol. Milano*, 1925, Serie I, **1**, fasc. iv: 69–112.—The author studied his subjects' estimates of the centers of geometric figures of three classes, namely, rectangular figures having two predominant directions, triangular figures having three predominant directions, and rhomboids wherein the direction of the diagonals and that of the sides are equally important. It was found that the only figure for which the estimate of the center is correct is the circle. The error, determined by the difference between the subjective or estimated and the objective or geometric centers, is greatest in triangular figures and increases in direct proportion to the size of the figures, thus conforming to Weber's law. The author believes that the main source of error is in the mental representation of component figures, another source being optical illusions. The error, therefore, makes possible the discovery of psychical similarities between figures.—*R. Schwarz* (George Washington University).

33. **Gatti, A. Contributo allo studio dell' illusione di Poggendorff.** (Contribution to the study of Poggendorff's illusion.) *Pubbl. Univ. Cattol. Milano,* 1925, Serie I, **1,** fasc. iv: 319–332.—The author proposes to prove the existence of a relation between the Poggendorff illusion (illusion of direction) and the illusions of extension. He proves that Poggendorff's illusion of direction depends mostly on the Müller-Lyer illusion of extension. The causes usually adduced—special retinal image, a false stereoscopy, irradiation, ocular movement, psychic contrast, inadequate perception of the whole, or the empathy of fantastic representations—may be accessory, but their effect is minimal in comparison with the Müller-Lyer illusion. He does not investigate the cause of the Müller-Lyer illusion, but he thinks that it would pay to look for causal relations between the two kinds of illusions and see if these two series of phenomena cannot be subsumed under a single conception.—*R. Schwarz* (George Washington University).

34. **Gault, R. H. "Hearing" through the sense organs of touch and vibration.** *J. Franklin Inst.,* 1927, **204,** 329–358.—The vibrating diaphragm of a telephone receiver was pressed against the skin of the subject, or else an instrument called the teletactor was used. The teletactor consists of five vibrating posts, each responding to a mutually exclusive frequency range, and each affecting a single digit of the subject by way of the finger nail. It was found that a subject, normal or deaf, could recognize by these means after considerable practise (1) vowels, (2) diphthongs, (3) consonants, and (4) short sentences. There is shown in tabular summaries: (1) the degree of superiority of lip-touch reading over lip-reading, (2) the per cent successes in recognizing final consonants, (3) the most probable confusion consonants, (4) the order of difficulty in recognizing certain consonants following long "e," and (5) the order of difficulty in recognizing certain paired vowels. It is reported that the upper limit in frequency perceptible through the sense organs of touch is much higher (2600 d.v. were perceived) than has been supposed (1552 d.v.). The difference limen for frequency is smaller than 9%. Deaf subjects report pleasure in "listening" to music. The author considers it probable that the understanding of conversation by means of the receptors of the skin will ultimately be achieved. —*D. B. Judd* (Bureau of Standards).

35. **Hayes, S. P. Ten years of psychological research in schools for the blind.** *Publ. Pa. Instit. Instruc. Blind,* 1927, No. 4. Pp. 16.—A brief resumé is given of the introduction of psychological research into schools for the blind through the influence of Dr. Goddard, then at the Training School at Vineland, N. J. In 1919–1920 a cooperative testing program was arranged with several agencies interested in work with the blind, the outgrowth of which was the Irwin-Haines Revision of the Binet and the adaptation of certain group tests to the blind. The workers at the Overbrook, Philadelphia, Pa. and the Perkins Institutions since 1916 are listed, with the various publications of each.—*H. M. Wiltshire* (Clark).

36. **Helmut, H., & Lueg, W. Über den Wirkungsbezirk von Temperaturreizen.** (On the area in which temperature stimuli become effective.) *Zsch. f. Sinnesphysiol.,* 1927, **58,** 188–194.—The existence of simultaneous contrast in the field of temperature sensations is questioned on the basis of experiments. Temperature sensations are confined to the area which is directly touched by the stimulus object.—*H. Klüver* (Columbia).

37. **Judd, D. B. A quantitative investigation of the Purkinje after-image.** *Amer. J. Psychol.,* 1927, **38,** 507–533.—The second positive after-image following visual stimulation by a brief light pulse, the so-called Purkinje after-image, was studied with respect to the conditions of its arousal. As the brightness of the stimulus is increased, this image passes through three characteristic stages: (a) gray, (b) whitish-violet, and (c) complementary to the primary image. Light of short wave length is more effective than that of long wave length in evoking

the Purkinje image. Under favorable conditions this after-image is at least three-fourths as distinct as the primary image. The brightness of the stimulus necessary to evoke it is least when the duration of the latter is 0.16 sec., but images may be obtained with durations from 0.02 to 0.30 sec. The brightness of the stimulus necessary to produce the image is a function of dark adaptation. The phenomena of the Purkinje image may be explained by the assumption that some retinal structure exhibits bio-luminescence.—*G. J. Rich* (Institute for Juvenile Research).

38. **Keeler, C. E. Iris movements in blind mice.** *Amer. J. Physiol.*, 1927, **81**, 107–112.—Working with a pure strain of mice which never develops the sensory elements (rods) of the eye and which is totally blind, yet has an iris entirely normal in appearance, the author found that the iris dilates and contracts under stimulation of light in spite of a non-functioning retina. The response is much slower than that of the normal eye under constant intensity of light and the amount of contraction is less than that of the normal eye.—*M. J. Zigler* (Wellesley).

39. **Kiesow, F. Ancora sulla validità della legge di Weber nel campo delle sensazioni tattili.** (More on the validity of Weber's law in the field of tactile sensations.) *Arch. ital. psicol.*, 1927, **5**, 245–250.—The question is raised whether or not Weber's law holds if only a single tactile organ is stimulated. Kiesow finds that the law holds also under such conditions and that the attempt to explain the results on the basis of variations in the extensity of the stimulus must be considered futile. In the experiments (one subject, A. Gatti) a new esthesiometer was used. Only the upper threshold was determined (method of minimal changes).—*H. Klüver* (Columbia).

40. **Kiesow, F. Di un apparecchio semplice per determinare esattamente la densità e la sensibilità dei punti tattili e dolorifici della pelle.** (On a simple apparatus for the exact determination of the density and the sensitivity of the tactile and pain spots of the skin.) *Arch. ital. psicol.*, 1927, **5**, 251–256.—The author points out the advantages of a new apparatus constructed for the study of tactile and pain sensations. Some experiments are reported in which pure pain spots were determined. Kiesow does not accept Goldscheider's theory that tactile and pain sensations depend on the same nervous apparatus. Tactile and pain sensations differ qualitatively as much as the odor of a flower differs from its color. These differences are differences in modality in Helmholtz' sense.—*H. Klüver* (Columbia).

41. **Krauss, S. Die Beleuchtung im Sehen des total Farbenblinden.** (The perception of illumination in totally color-blind individuals.) *Zsch. f. Psychol.*, 1927, **102**, 219–264.—The author, starting from the investigations of Bühler, Katz, and Gelb, is chiefly interested in the phenomenal appearance of colors in totally color-blind persons. He reports on experiments carried on with visually defective children and with one case of total color-blindness. The conclusion is drawn that a totally color-blind person is defective not only with regard to colors proper but also with regard to neutral colors. Such an individual does not see white or black, but bright or dark. He cannot see shadows, gloss, luster and glistening as the normal person does; in short, the perception of illumination (*Beleuchtungswahrnehmung*) is lacking. The brightnesses of objects assume the character of object colors, but they do not become surface colors in Katz' sense. In decreased and colored illumination the brightness qualities of objects are changed to a greater extent than in normal persons, owing to the fact that we have not an approximate constancy of colors. The illumination is not taken into account by such a person. Phenomena of illumination represented on pictures are not recognized, or are recognized only on the basis of special experiences. The lack of perception of illumination seems to be more characteristic for total color-blindness than the lack of color perception. Katz' explanation

that individual experience is responsible for separating illumination and illuminated object is rejected. The findings are used in support of Bühler's duplicity theory.—*H. Klüver* (Columbia).

42. **Kucharski, P. Sur la persistance des sensations auditives.** (On the persistence of auditory sensations.) *C. r. Soc. biol.*, 1927, **97**, 691–693.—Taking up the question of auditory persistence, studied by A. M. Mayer (1894) and Allen and Weinberg (1924), the author believes he is able to prove that in audition, contrary to what takes place in vision, there is no appreciable persistence of the sensation; that the abatement of the phenomenon of sensory excitation is extremely rapid; and that the fusion of discontinuous excitations cannot be produced. By securing 500 interruptions per second for a sound of 1000 d.v. and 100 interruptions for that of 200 d.v., Kucharski was able to determine that for the sound of 200 d.v. everyone perceived distinctly the discontinuities, the spaces separating the tonal pulsations, but for the sound of 1000 d.v. this discontinuity was chiefly perceived as a very slight unevenness of the sound.—*Math. H. Piéron* (Sorbonne).

43. **Ladd-Franklin, C. Visible radiation from excited nerve fiber: the reddish blue arcs and reddish blue glow of the retina.** *Science*, 1927, **66**, 239–241.—The reddish-blue arcs produced by a band of light seen in a dark room are followed by an after-image. Visual sensations produced by mechanical or electrical stimulation are not followed by after-images. Since the reddish-blue arcs follow the fibers of the optic nerve, they must be due to the light given off by the active nerve fibers.—*G. J. Rich* (Institute for Juvenile Research).

44. **Landolt, M. Le mouvement complémentaire.** (Complementary movement.) *La nature*, 1927, No. 2764, 10–11.—When anyone looks attentively long enough at a body in rectilinear motion and then looks at immobile objects, the latter seems to move in the opposite direction. The author rejects the explanation, generally held, of the prolongation of nystagmus after cessation of the cause which has produced it. He believes that it is not a matter of an ocular movement, but of a phenomenon having its seat in the retina itself. When the retina receives an impression of light, there is a destruction of a visual substance in the retina which is reconstituted as soon as the light impression ceases. There is therefore an alternation: a positive phase of breaking down, and a negative phase of building up, perceptible under certain conditions, which gives an opposite sensation, a contrast with the initial positive phase. In proportion as a light image changes its phase on the retina, the points which it leaves at each instant, one after another, are the seats of the successive phenomena, and if the impression is constantly renewed, there will be produced in the retina itself a wave, a surge, intense enough to be perceptible for some time after the regard is directed toward immobile objects.—*Math. H. Piéron* (Sorbonne).

45. **Raybaud, L. Les moyens de protection de la vue contre les radiations des lumières artificielles.** (The means of protecting sight against the radiations of artificial lights.) *C. r. Soc. biol.*, 1927, **97**, 388–390.—The best means of protecting the eyes is to make use of electric bulbs of rough yellowish glass or to place before ordinary bulbs screens of roughened glass coated with celluloid or yellowish collophanite.—*Math. H. Piéron* (Sorbonne).

46. **Strughold, H. [The specific receptors of cold sensations.]** *Verhand. Physik.-Med. Gesellsch. Wurzburg*, 1926, **51**, 31–34.—Ingenious and even hazardous methods were used to determine the receptors for cold, especially in the human sclera and cornea. All the methods pointed to the end-bulbs of Kraus as receptors for cold. Groups of end-bulbs vitally stained agreed in distribution with the cold points. The thresholds of cold points were much lower in sclera and cornea where the end-bulbs lay close to the surface and they were higher where the bulbs lay deeper. Methylene blue was used for vital staining of the eye. This is an anesthetic when thus used, and as it penetrated the tissue the

thresholds for pain and cold were tested. As the epithelium was stained the threshold of pain became higher. When the stain penetrated deeper to the layers in which the end-bulbs were located there was increasing insensibility to cold. The insensibility and lowered sensibility to cold continued only 8–14 days. That for pain persisted more than a year. Thus the two senses were separated by the drug, and the free nerve endings in the epithelium were shown to be organs of pain. 7 figures.—*L. W. Cole* (Colorado).

47. **Walker, W. Über die Adaptionsvorgänge der Jugendlichen und ihre Beziehung zu den Transformationserscheinungen.** (On processes of adaptation in young people and their relation to the phenomena of transformation.) *Zsch. f. Psychol.*, 1927, **103**, 323–383.—A contribution to the fundamental problems of the psychology of color from the Marburg Institute of Psychology. The study seeks to determine: (1) whether or not there is a quantitative difference between the prolonged visual adaptation of eidetic and non-eidetic individuals; and (2) whether or not such processes of adaptation can be influenced by psychic factors. Nagel's adaptometer was used for determining the increase in sensitivity during dark adaptation. Most of the subjects were between 10 and 18 years. In a special investigation the attempt was made to exclude the pupillary reflex. In connection with the experiments on adaptation, the relation of the phenomena of transformation (cf. the previous studies by Jaensch and Kroh) to processes of adaptation was studied. It is concluded: (1) that processes of adaptation during the eidetic stage of development are 3–4 times more pronounced than in adults; and (2) that in integrated subjects adaptation can be strongly influenced by psychic factors ("integrated adaptation"). These differences in adaptation cannot be accounted for in terms of differences in the pupillary reflex. The results seem to be in agreement with the facts concerning the psychic integration of many physiological and psychological functions and the greater responsiveness to external stimuli in children and young people. The phenomena of transformation were found to be more pronounced during the eidetic age than in adults. Eight tables and nineteen graphs.—*H. Klüver* (Columbia).

48. **Weber, C. O. The properties of space and time in kinaesthetic fields of force.** *Amer. J. Psychol.*, 1927, **38**, 597–606.—The kinaesthetic perceptions of intervals of space and time are radically altered by the presence of "fields of force" or load. A given distance under load is phenomenally equivalent to a greater distance under less load, and a given time interval under load is phenomenally equivalent to a smaller time interval under less load. The phenomenal geometry of the kinaesthetic sense is a geometry of space-time.—*G. J. Rich* (Institute for Juvenile Research).

49. **Werner, H., & Creuzer, H. Über einen Fall von "Schichtspaltung" beim Bewegungssehen.** (On a case of "cleavage" in visual perception of movement.) *Zsch. f. Psychol.*, 1927, **102**, 333–337.—Study of an individual who under experimental conditions was able to see an object perform two different kinds of movements simultaneously. For example, along with the stroboscopic movement of a certain object, a rotary movement of the same object was seen. The analysis brought out that the word "see" was used with reference to two different processes of seeing. These two processes are considered as the result of a cleavage or of a separation of the specific optical stratum from the motor-organic stratum. Seeing is not always identical with optical seeing. If a cleavage takes place, the objects of the external world lose their objective character to a certain extent. This objectivity is restored upon a unification of the different strata.—*H. Klüver* (Columbia).

50. **Zoethout, W. D. Physiological optics.** Chicago: Professional Press, 1927. Pp. 368. $5.00.—A volume designed to serve as an introduction to vision and the anatomy and physiology of the eye; it may be considered as intro-

ductory to the study of such a volume as Helmholtz. Three chapters are devoted to a discussion of general neural and muscular organization, while the anatomy of the eye is treated in one chapter. The physics of light receives a separate treatment. Three chapters are concerned with the mechanics of vision, one with the defects of the eye, and another with the rôle of the iris. Sixty-five pages are devoted to a presentation of the more generally accepted facts of the physiology and psychology of brightness vision. A comparable space deals with the facts and theories of color vision, one chapter containing an exposition of the better known color theories. The remainder of the volume is devoted to accounts of the working of the extrinsic eye muscles, binocular vision, cortical integration of visual impulses, and short chapters on "Visual efficiency," "Protective mechanism," and "Nutrition of the eye." Throughout, the book is profusely illustrated. The references are only to the more general works.—*F. A. Geldard* (Clark).

[See also abstracts 1, 52, 55, 57, 58, 71, 109, 210, 221.]

FEELING AND EMOTION

51. **Dunlap, K. The rôle of eye-muscles and mouth-muscles in the expression of the emotions.** *Genetic Psychol. Monographs*, 1927, **2**, No. 3, 196–233.—A preliminary study, with photographs. Recognition and naming of emotions is shown to be influenced less by the eyes than by the mouth, especially in the case of "pleased" expressions.—*M. Meenes* (Lehigh).

52. **Metcalf, J. T. The pleasantness of brightness combinations.** *Amer. J. Psychol.*, 1927, **38**, 607–623.—Metcalf studied, by the method of paired comparisons, the relative pleasantness of various combinations of black, white and grays. In general, the subjects preferred combinations of two grays which represented a relatively small degree of brightness difference. Combinations of black with white were least preferred. The background brightness played a greater part than did the central brightness in determining the pleasantness of a combination. A dark center on a light background was slightly preferred to the reverse arrangement. Among the single shades, middle gray was in general most preferred, and the pleasantness of the single component shades was an important factor in determining the pleasantness of a combination.—*G. J. Rich* (Institute for Juvenile Research).

[See also abstract 168.]

ATTENTION, MEMORY AND THOUGHT

53. **Dallenbach, K. M. Two pronounced cases of verbal imagery.** *Amer. J. Psychol.*, 1927, **38**, 667–669.—One of the individuals described had only kinaesthetic and the other only auditory imagery for words. Both lacked visual images.—*G. J. Rich* (Institute for Juvenile Research).

54. **Gengerelli, J. A. Mutual interference in the evolution of concepts.** *Amer. J. Psychol.*, 1927, **38**, 639–646.—The common element contained in a series of symbols was learned less readily when the same symbols had previously been learned in the formation of other concepts than when they had not so entered into other concepts. These results indicate a true interference in the evolution of concepts.—*G. J. Rich* (Institute for Juvenile Research).

55. **Guilford, J. P. "Fluctuations of attention" with weak visual stimuli.** *Amer. J. Psychol.*, 1927, **38**, 534–583.—Guilford attempts to set the problem of fluctuations with liminal visual stimuli in its proper historical light; to show that this phenomenon is nothing more than a matter of the limen; to discover the ways in which it is dependent upon the intensity of the stimulus; to point

out the operation of certain peripheral and central physiological factors; and to decide the general question whether the phenomenon is to be regarded as a fluctuation of attention. He finds experimentally that the stimulus value which gives 50% visibility is near the liminal value when allowances are made for local adaptation. The relative lengths of the periods of visibility and invisibility are functions of the intensity of the stimulus and fit the phi-gamma hypothesis. The total period of fluctuation, however, reaches a minimum near the liminal intensity. There are a number of physiological conditions involved in the fluctuations which include local retinal adaptation, eye movements, and local central fatigue or inhibition. Guilford concludes that neither from psycho-physical evidence nor on the basis of phenomenology can this phenomenon be called a fluctuation of attention.—*G. J. Rich* (Institute for Juvenile Research).

56. **Klüver, H. An experimental study of the eidetic type.** *Genetic Psychol. Monographs*, 1926, **1**, 71–230.—Qualitative study of the imagery of *Eidetiker* including both after-images and *Anschauungsbilder*. The theory directing the experimental work of the Marburg School is rejected and the author is concerned with a phenomenological description of the imagery of 27 adult and child subjects of both sexes, of the eidetic type. Many types of visual situations are used to arouse the imagery of the subjects. The results are summarized separately for each type of material used. "There are no normal and abnormal AB (*Anschauungsbilder*), but only normal and abnormal possessors of AB. Their AB, however, may present recognizable differences, and these differences may some day become . . . indices for pre-psychotic states. . . . In general it seems quite possible to learn something about the mental life of psychotic personalities by investigating their AB." The young *Eidetiker* seem to be average or better in intelligence while among the adult *Eidetiker* a high IQ is rare. The author makes suggestions for further study of the eidetic disposition and appends a bibliography of over 100 titles.—*M. Meenes* (Lehigh).

57. **Petzoldt, J. Komplex und Begriff. I.** (Complex and concept. I.) *Zsch. f. Psychol.*, 1926, **99**, 74–103.—Starting from an examination of certain optical inversions, Petzoldt arrives at the conclusion that simplicity, nonperceptual character, and generality are the three chief characteristics of *Gestaltqualitäten*. *Gestaltqualitäten* are simple and not compounded of other psychological elements; they have not *Gestalt* character, but are related to perceived *Gestalten;* they are capable of transposition, if only approximate identity exists. The characteristics of *Gestaltqualitäten* are, as the author tries to show, the characteristics of concepts in general. Petzoldt does not accept the theories advanced by Sigwart, Erdmann, Ziehen, von Kries, and G. E. Müller, who think general concepts to be deducible from sensations and their reproductions.—*H. Klüver* (Columbia).

58. **Petzoldt, J. Komplex und Begriff. II.** (Complex and concept. II.) *Zsch. f. Psychol.*, 1927, **102**, 265–306.—"Concepts are nowhere," but nevertheless they are empirical. Perceptual experiences have two components: the sensory and the non-sensory, the *anschauliche* and the *unanschauliche* component, sensation and concept. Perceptions always presuppose concepts. From this point of view the author considers a number of problems: the problem of absolute (egocentric) localization, assimilation, "eidotropic" movements (Lindemann), Euclidean space, and Weber's law. Finally, a biological theory of concepts is presented. Certain central neurological processes are assumed as the biological basis for concepts. The work of Richard Avenarius receives special consideration.—*H. Klüver* (Columbia).

59. **Saint-Paul, C. Cérébrologie. Le "je" et la volonté de l'homme. De la crédulité de l'intelligence.** (Cerebrology. The "I" and the will in man. Concerning the credulity of intelligence.) *Prog. méd.*, 1927, **10**, 376–378.—The author, after having accorded to intelligence the following characters: sureness, inevitability, instantaneousness, and infallibility, asks if one is able then to

speak of the credulity of intelligence. Intelligence, he affirms, is infallible for elements which are normally submitted to its discrimination. Intelligence may be deceived when these elements are not those which ought to be submitted normally to its discrimination or when the elements are vitiated or abnormally arranged. And the author gives this spiritualistic hypothesis: there cannot be any deficiency of intelligence; there is no pathology of intelligence. All deficiency in intellectual processes, all vitiation of these processes, has for its origin and cause an anatomical alteration or a disturbance in the connective system or in the organic hierarchies.—*Math. H. Piéron* (Sorbonne).

60. **Saint-Paul, C. Le "je" et les volontés de l'homme. Le function miroir.** (The "I" and the will in man. The mirror function.) *Prog. méd.*, 1927, **10**, 866–874.—Intelligence is capable of exercising discrimination, not only upon material elements, but also upon the memories of conscious acts; that is to say, upon material elements which have previously left an impression. This enlarges the field over which intelligence exercises its influence. There is also consciousness of self, the activity in which intelligence reacts upon intelligence, as though seeing itself in a mirror. In man this mirror function is exercised through the nervous mechanism of language.—*Math. H. Piéron* (Sorbonne).

61. **Symonds, P. M. Laws of learning.** *J. Educ. Psychol.*, 1927, **18**, 405–413.—Twenty-three laws or principles of learning are given and illustrated. They were obtained from C. Lovatt Evans' book "Recent advances in physiology." The laws are the well-known ones of conditioned response, use, trace reflex, the latent period of response and several other laws and principles less well known.—*A. M. Jordan* (North Carolina).

62. **Weigl, E. Zur Psychologie sogenannter Abstraktionsprozesse. I. Untersuchungen über das "Ordnen".** (On the psychology of the so-called processes of abstraction. I. Investigations on "arranging in order".) *Zsch. f. Psychol.*, 1927, **103**, 1–45.—A cerebral case (case history follows) is studied to determine reactions to forms, colors and objects of daily life under experimental conditions. In most experiments the patient was instructed to arrange the stimulus material, to put it in order. Weigl used Holmgren's test, geometric figures differing in color and size, and 30 objects of daily life (a knife, a ball, two forks, an apple, etc.) which presented different possibilities of arrangement. In some experiments children and normal adults were examined with the same stimulus material. The reactions of the patient were similar to those previously described by Gelb and Goldstein. In organizing or grouping a number of objects, the patient assumed a very concrete attitude as contrasted with the categorical attitude of normal adults. It was very difficult for the patient to shift from one method of grouping (e.g. according to color) to another method (e.g. according to form). The conditions through which a shift from one principle of grouping to another could be effected were studied. The view that we abstract as the result of recognition of common elements cannot be substantiated experimentally. If there is an unsophisticated and concrete attitude during the grouping or arranging of objects, abstraction processes *sui generis* or higher psychic processes are not involved.—*H. Klüver* (Columbia).

63. **Weigl, E. Zur Psychologie sogenannter Abstraktionsprozesse. II. Wiedererkennungsversuche mit Umrissfiguren.** (On the psychology of the so-called processes of abstraction. II. Recognition experiments with contours.) *Zsch. f. Psychol.*, 1927, **103**, 257–322.—Further investigations on the process of abstraction with stimulus material which meets three requirements: (1) the objects may be viewed as belonging to different groups or spheres; (2) there are objectively identical objects, common elements, in the different spheres; and (3) there is the possibility of determining whether or not this objective identity is experienced by the subject. Stimulus material: cards with drawings (contours), exposed tachistoscopically for 80 σ. The two exposures were separated

by a five second interval. The subjects, about 110 students of psychology, had to describe what they had seen or to answer a number of questions. The study contains a large number of results apt to throw light on the different phases of abstraction. In general, it is concluded that the experience of a certain sphere, such as letters, curves, numbers, animals, etc., is basic for the recognition of common elements.—*H. Klüver* (Columbia).

[See also abstracts 47, 233.]

NERVOUS SYSTEM

64. **Banzet, P. M. La cordotomie.** (Cordotomy.) Nancy: Berger-Levrault, 1927. (Thèse de médecine.) Pp. 120.—After the study of observations and histological findings, it would seem reasonable that the remaining lateral fasciculus is the conductor of painful and thermic sensitivity. No bibliography. —*Math. H. Piéron* (Sorbonne).

65. **Bills, A. G. Inhibition and facilitation.** *Psychol. Bull.*, 1927, **24**, 473-487.—(Review of literature; 57 titles.) The two most prominent theories of neural inhibition are the drainage theory, favored by McDougall, and the refractory phase hypothesis, favored by Dodge. Inhibitory influence from enduring sets calls for still other explanation, according to Myers. Facilitation has been less a problem, being usually explained with mechanical descriptions of synaptic connections, as by Herrick. Inhibiting and facilitating influences that have been studied may be grouped together. (1) Under background, may be listed studies of visual background, weather conditions, time of year and of day, music, etc. Conflicting results with interruptions of work doubtless implicate the attitude factor greatly. (2) Under motivation fall studies of the effect of encouragement and discouragement, electric shock punishment, competition, etc. (3) Under attitude fall studies of the effect of mood, muscular tension, direction of attention, suggestion, and presence of an audience.—*J. F. Dashiell* (North Carolina).

66. **Brouwer, B. Anatomical, phylogenetical and clinical studies of the central nervous system.** Baltimore: Williams & Wilkins, 1927. Pp. 67. $2.50.—The three chapters which make up the book were delivered as Herter lectures at The Johns Hopkins University in 1926. In chapter one the author discusses the projection of the retina in the brain. With the cooperation of an ophthalmologist, W. P. C. Zeeman of Amsterdam, the author carried out operations upon the retinas of rabbits, cats, and monkeys. These operations destroyed selected portions of the peripheral retina or of the macula. The exact character of the lesions was determined post-mortem. The nervous system was studied by the Marchi method, and degenerative changes were traced through the nerves and tracts as far as the external geniculate body. Emphasis is placed upon the segregation of the fibers which serve monocular vision from those which serve binocular vision. In this the author's work is related to that of Behr and Lutz. In monkeys, the monocular fibers pass through the ventral portion of the crossed external geniculate body, where they occupy but a small area in comparison with the binocular fibers. Secondary degenerations in the external geniculate body arising from lesions of the macula were widespread and not sharply localized, although they were most numerous in the center of that body. The second lecture deals with the pathology of sensibility. The third lecture treats of the significance of phylogenetic studies for the neurologist. In each lecture use is made of the theory that the more recent neural structures are less resistant to destruction than the less recent ones. In the third lecture, sclerosis multiplex is the chief example discussed. In the second lecture, the author develops his views on the basis of Head's theory of cutaneous sensitivity. Brouwer is not

convinced that two distinct pathways for protopathic and epicritic sensitivity exist. He does believe that the posterior columns of the cord carry a newer and higher form of sensitivity than that carried by the lateral columns. Evidence to support this view is presented. Brief bibliographies are given.—*W. S. Hunter* (Clark).

67. **Cardot, H., Régnier, H., Santenoise, D., & Varé, P. Influence de l'activité musculaire sur l'excitabilité cérébrale.** (The influence of muscular activity on cerebral excitability.) *C. r. Soc. biol.*, 1927, **97**, 698–701.—The authors, having observed in previous experiments on excitation of the cerebral cortex that they obtained aberrant results when they worked on trembling or shivering animals, wished to see if production of muscular activity did not have an influence on cerebral excitability. They worked on animals anesthetized for the operative interventions, but the chronaxies were taken after complete awakening. Three series of experiments were made. (1) They tetanized the peripheral end of the sciatic nerve. In these experiments the chronaxie, stabilized after awakening, showed a rapid lowering, the rapidity and intensity of the diminution being a function of the duration of the excitation of the sciatic. (2) They brought about shivering by chilling the animals. They obtained again a very rapid lowering of the cerebral chronaxie after the beginning of the chill. (3) With the help of eserin they brought on muscular trembling, after having severed the filaments of the pneumogastric nerve going to the thyroid, in order to eliminate the usual action of eserin. There was still a lowering of the chronaxie quickly following the appearance of the trembling. It may be concluded, therefore, that certain productions of muscular activity exercise an influence upon cerebral excitability.—*Math. H. Piéron* (Sorbonne).

68. **Chauchard, A., Chauchard, B., & Mazoué, H. Contribution à l'étude quantitative du réflexe médullaire.** (A contribution to the quantitative study of the medullary reflex.) *C. r. Soc. biol.*, 1927, **97**, 363–364.—The authors have studied in the frog the law found by L. and M. Lapicque in the toad. They have shown that the excitability of the sensory fiber is measured by a chronaxie, while that of the centers is characterized by a summation of diverse rhythms. They have investigated the question of what becomes of the liminal voltage for a fixed capacity, which corresponds to the chronaxie, when the number of excitations is varied, their frequency remaining constant. In this case the augmentation of the number of excitations lowers the voltage to a minimum below which it does not go whatever may be the number of excitations. This minimum marks the time of summation characteristic of the iterative mechanism studied.—*Math. H. Piéron* (Sorbonne).

69. **Fraser-Harris, D. The reality of nerve-energy.** *Brit. J. Med. Psychol.*, 1927, **7**, 203–209.—The use of the terms nerve-energy and nerve-force is discussed historically. They have in the past been used freely by neurologists and physiologists, though not used at present in physiology texts. Moore used the term biotic energy as synonymous with all forms of energy in the living organism; nerve-energy would be one form of biotic energy. The author suggests the term neuronic energy for what is often referred to as nerve-energy. He then asks: "What is really known about manifestations of energy in nerve-fibers and in nerve-cells?" Nerve impulses are inferred to exist from the recurring disturbances of electric potential when the nerve is stimulated; in efferent fibers these have a frequency of 50 to 70 per second; in afferent 21 to 33 per second. Since the all or none principle holds, what is the actual difference between feeble and powerful innervation of (for example) a musculo-motor nerve? Feeble innervation of a muscle means that less than all of its fibers are thrown into activity, and the frequency of the rhythm of the descending impulses has decreased; and powerful innervation means that all fibers are active and the descending impulses increased. Adrian defined nerve-energy as "the total potential energy

in the neurone available for use in the transmission of impulses." This is sufficiently comprehensive, according to the author, to include both augmenting and inhibitory factors, as well as cerebellar innervation. If nerve-energy is real, it can be measured. Horsley believed that muscle was a reliable medium for measuring it. The author cites eleven possibilities for measuring nerve-energy. He then concludes: "We cannot greatly err in calling neuronic energy a species of biotic energy, the biotic energy that manifests itself in neurones. A moribund invalid or a despondent melancholic has little biotic or neuronic energy; the eupeptic athlete has much. Unless neuronic energy is a reality, the clinical conception of neurasthenia is meaningless. In the present state of the psychological chaos involving this subject, it would not be profitable to attempt to relate neuronic energy with mental energy—important as this relationship must be."—*N. Fenton* (Ohio).

70. **Fremont-Smith, F., & Forbes, H. S. Intra-ocular and intracranial pressure.** *Arch. Neur. & Psychiat.*, 1927, **18**, 550–564.—The results of experiments done on twenty-three animals show that, although the intracranial and the intra-ocular pressures are not directly dependent on one another, changes of hydrostatic or of osmotic pressure induced in the blood produce a parallel change in pressure in the eye and in the cranium, or, in the words of Claude Bernard, parallel "response to variations in the internal environment." These observations serve to emphasize again the similarity in the mechanisms for formation and for absorption of intra-ocular and intracranial fluids, and to indicate that these mechanisms are fundamental in the fluid exchange of the body.—*L. M. Hatfield* (Boston Psychopathic Hospital).

71. **Klüver, H. Visual disturbances after cerebral lesions.** *Psychol. Bull.*, 1927, **24**, 316–358.—(A review of literature: 271 titles.) Three chief lines of investigation may be distinguished. (1) Henschen's view that retinal points are projected upon the cortex in a circumscribed and point by point way, rather than diffuse as urged by von Monakow, tends to be strengthened by the bulk of clinical findings in connection with war cases. Localization in the area striata is favored by many. As to the cortical representation of color vision no definite results have been obtained. (2) Brain localization of higher optical processes, such as depth-perception, form-perception, etc., although much studied, is not in an advanced stage. It has been urged that the physiologist needs here to employ psychological methods in addition to his anatomical and pathological technique. (3) In the light of work on visual disturbances, cerebral localization in general is coming to be recognized as decidedly an open question. For instance, Goldstein makes the interesting suggestion that the two extreme views of von Monakow and Henschen may each be both right and wrong; as fibers from a specific retinal part may run not only to a localizable projection center but also diffuse more generally. Furthermore "we are likely to be fascinated by histological results when it is possible that electrochemical processes are the basis for function."—*J. F. Dashiell* (North Carolina).

72. **Laugier, H., & Mazoué, H. Reflexe croisé obtenu par excitation unique chez la grenouille non décérébrée et morphinée.** (Crossed reflex obtained by a single excitation of the frog, not decerebrate but under the influence of morphine.) *C. r. Soc. biol.*, 1927, **97**, 227–229.—In the decerebrate frog, the reflex cannot be produced by a single electrical excitation acting on the central end of the sensory nerves; the reflex functions only by summation; it is an iterative mechanism. In a frog, not decerebrate but rendered motionless by morphine, the authors have observed that a crossed reflex (retraction of the foot) may be obtained by a single excitation brought to bear either on the interdigital membrane or on the central end of the divided sciatic nerve. The threshold is not raised, the contraction is good, the relaxation is very gradual, and the fatigue is rapid. There follows this response, a refractory period during which the re-

flex to the excitation is very hard to obtain or is no longer obtainable at all, but the reflex can always be gotten by summation. The chronaxie is around 1/10,000 of a second. If an ablation of the hemispheres is then made, the response to a single excitation persists, but the threshold is heightened, and the refractory period is longer. A like result is obtained after destruction of the optic lobe. It is only after the destruction of the cerebello-bulbar region that the response to the single shock disappears and that summation becomes indispensable for obtaining the reflex.—*Math. H. Piéron* (Sorbonne).

73. **Mazoué, H. Modification des lois de sommation sous l'influence d'applications de morphine sur la moelle.** (The modification of the laws of summation under the influence of the application of morphine to the medulla.) *C. r. Soc. biol.*, 1927, **97**, 465–466.—In the frog, whether decerebrate or not, the injection of morphine permits the obtaining of the reflex response to an isolated excitation. If the modifications are sought which the poison produces on the excitability of the nervous elements, it is seen that there are three modifications of the law of rhythm which go on progressing in a continuous manner; that the chronaxie of the centripetal nerve increases gradually until it attains 4 or 5 times its initial value, then diminishes, and finally no more response is given even to summational stimuli.—*Math. H. Piéron* (Sorbonne).

74. **Morgan, L. O. The corpus striatum.** *Arch. Neur. & Psychiat.*, 1927, 18, 495–549.—A study of secondary degenerations following lesions in man and of symptoms and acute degenerations following experimental lesions in cats has produced the following facts: In general, the fibers taking origin in the ventral part of the globus pallidus, especially in the medial division, terminate on nuclei in the subthalamic region and the region of the posterior commissure, and have to do with general movements of the body. Fibers arising in the dorsal part of the globus pallidus, especially in the lateral division, are distributed to motor nuclei of the pons and medulla and are concerned with speech, mastication, deglutition and facial expression. A lesion in the left lenticular nucleus of the cat involving the ventral part of the lateral division and injuring the medial division of the globus pallidus is followed by: (1) left circus movements accompanied by extreme hypertonicity of the muscles on the left side of the body; (2) a general hypertonic, restless condition affecting all muscles of the body; (3) constriction of the left pupil; (4) athetosis in some cases, and occasionally tremor. These symptoms all disappear within eight or ten days, except the constriction of the left pupil, and the muscles that were previously hypertonic become somewhat hypotonic. A lesion in the dorsal part of the putamen and lateral division of the globus pallidus is followed by disturbances of the voice and difficulties in taking, masticating and swallowing food. These symptoms are at first due apparently to spasticity of the muscles concerned in these activities. After eight or ten days, these muscles relax and lose their tonus until a partial paralysis results. The early symptoms that follow lesions in the lenticular nucleus are considered to be caused by irritative stimulation due partly to the degenerative process in the striate system of fibers stimulating lower motor centers in the subthalamus, midbrain, pons and medulla and partly to irritation of the area surrounding the lesion. The later relaxation and loss of former symptoms is considered a true deficiency phenomenon. It is also believed that the motor disturbances attributed to progressive degeneration in the corpus striatum in man are due to irritative stimulation of the corpus striatum rather than to loss of striate function.—*L. M. Hatfield* (Boston Psychopathic Hospital).

75. **Pastori, G. Sull' anatomia macro-microscopica della "epiphysis cerebri" nei mammiferi e nell' uomo.** (On the macro-microscopical anatomy of the pineal body in mammals and in man.) *Pubbl. Univ. Cattol. Milano*, 1925, Serie I, **1**, fasc. iv: 21–65.—An original investigation into the shape and structure of the pineal body in man and mammals. The authoress found that the

pineal body of mammals belongs to two morphological types: one, spheroidal with distal and sometimes pointed poles; the other, bud-shaped, found in rodents. The first type is entirely covered by the corpus callosum; the second type is only partly covered and its distal swelling is connected with the endocranium. As to its functions, the findings of the authoress agree with the hypothesis that the pineal body may exercise a secretory function and play some part in the regulation of the vegetative life.—*R. Schwarz* (George Washington University).

76. **Rogers, F. T. The functional significance of the extra-pyramidal systems.** *Psychol. Bull.*, 1927, **24**, 216–239.—(A review of recent literature.) The extra-pyramidal systems have received by no means the attention given the pyramidal in years past; and the clinical observations and histopathological studies that have been given the former reveal a wealth of extraordinarily complicated and sometimes conflicting findings. The corpus striatum has been studied by different methods. Localized stimulation had led to mainly negative results. Decerebration with and without destruction of striatum performed on birds and mammals has indicated a large part played by the latter in the execution of movements of head and neck involved in feeding. Clinical observations on humans have also tended to broaden this reference by suggesting that it is the seat of disturbances in muscular activity of the type involved in paralysis agitans, parkinsonism, the choreas, and athetosis, though not in spastic paralyses and specific contractures, these being attributed to the pyramidal system. It is by many supposed that lesions of the corpus striatum remove an inhibiting or steadying influence exerted by this organ upon other subcortical centers and through them upon muscular activity. "In normal muscular activity a dual system is involved; the cortico-spinal (pyramidal) and the more diffuse, less direct, extra-pyramidal. There is a balanced action and integration of the two in the normal individual. The extra-pyramidal system is the only type of control present in the lower vertebrates; the pyramidal type reaches its greatest size and functional value in the anthropoid apes and man. So far as can be judged the development of the cerebral cortex has not abolished the functional activity of the basal ganglion system. Anatomically, the two systems seem to be largely independent of each other as there is little or no direct connection between the corpus striatum and the cortex. Clinically localized disease of the striatal system leads to muscular disability which the patient can not control. In what way and to what extent has the cortical influence altered the activity of this subcortical system? How are the two co-related in the normal individual?" "Long continued postural or tonic activity is characteristic of this subcortical motor system, as phasic or short lasting activity characterizes cortical motor control." Studies of the extra-pyramidal systems have aroused interest in two questions especially. (1) The problems of muscle tonus (hypo- and hypertonicity, rigidity), have received much attention. The modes of afferent impulses leading eventually to tonus maintenance have been named: labyrinthine, proprioceptive, optic; and the cerebellum identified as importantly involved. The abolishing of postural activity on occasion has usually been traced to cerebral inhibition, but results are not conclusive. (2) The problem as to what mechanism correlates the different muscles in the execution of normal movements is still farther from solution. Coördinated movement involves the participation of several muscle groups: the protagonists, the antagonists, and the synergistic or supporting muscles. The combinations of these three classes in different types of movement form apparently very many different patterns, and the question as to the controlling neural mechanisms is far from solution. It is asserted, however, that the corpus striatum is not solely or even principally involved.—*J. S. Dashiell* (North Carolina).

77. **Wechsler, I. S. A textbook of clinical neurology.** Philadelphia:

Saunders, 1927. Pp. 725. $7.00.—This text book comprises the latest advances in the subject, and is intended primarily for medical students and the general practitioner. With this attitude in mind, the author has emphasized the clinical symptoms, without stressing polemic material or detailing case reports. The customary introductory chapters on the anatomy and physiology of the nervous system are consequently omitted, and in place of these, under each clinical entity there is given a brief description of the anatomical and pathological facts of each disease discussed. There are also omitted most of the diseases of the ductless glands, as the author considers that these belong more properly to general medicine. While there is a minimum of psychiatric material, yet the neuroses are discussed in detail. The clinical classification adopted is that given by Oppenheim. The various sections of the volume include methods of examination (including psychometric tests), diseases of the spinal cord and peripheral nerves, general and focal brain diseases, including the rarer cerebral disorders, and the neuroses. These latter are classified and described from the analytical standpoint. The etiology of the neuroses is given in detail both from the organic and psychological standpoints and included under the latter is a brief but accurate and sympathetic description of the dynamic concepts of the neuroses, particularly the theories and technique of psychoanalysis, thus differing from many recent text books on neurology. To each important disease or subject there is appended a brief bibliography and in addition there is an index.—*I. H. Coriat* (Boston).

[See also abstracts 43, 92, 101, 142.]

MOTOR PHENOMENA AND ACTION

78. **Abderhalden, E., & Hartmann, J. Vergleichende Untersuchung der Wirkung von aus Schilddrüsen gewonnenem Thyroxin und von synthetisch bereitetem.** (Comparative investigation of the action of thyroxin obtained from thyroid glands and that synthetically prepared.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 531–534.—Identical effects upon growth and metamorphosis of tadpoles are obtained from natural thyroxin and the synthetic product prepared according to the method of Harington and Barger.—*L. T. Spencer* (Yale).

79. **Allen, C. N. Studies in sex differences.** *Psychol. Bull.*, 1927, **24**, 294–304.—The recent literature (74 titles listed) includes some studies of sex differences as to skull size and shape, size of appendix, rate of metabolism, and emotional variations of blood pressure. Researches continue on the somatic effects of hormones from cells in the reproductive apparatus in female and male; and further study of the subject tends to substantiate Hollingworth's earlier conclusion that menstruation is less a handicap to woman than is her warped idea of its effect. As for mental differences between the sexes, a greater memory ability of women is found by several investigators, and a difference in conversation interests has been shown; but for most other traits, as well as for variability within each sex, the results are conflicting. Certainly, the differential social training of the two sexes remains a heavy factor.—*J. F. Dashiell* (North Carolina).

80. **Baumgarten, F. Die Orientierungstäuschungen.** (Errors of orientation.) *Zsch. f. Psychol.*, 1927, **103**, 111–122.—In visiting a new city we orientate ourselves in general from a "fixed" point, e. g. from our hotel or from the railroad station. Upon revisiting the place and starting perhaps from a different station we are frequently subject to certain errors of orientation. The first topographical scheme with its places and directions is subjectively fixed in such a way as to bring about such errors or even disorientation. Baumgarten reports some personal experiences of this type. Similar errors or illusions may arise upon awakening during the night. Eight diagrams.—*H. Klüver* (Columbia).

81. **Klein, H. V. Zur Definierung der Kastration und verwandter Begriffe.** (The definition of castration and related concepts.) *Anat. Anz.*, 1927, **63**, 328–341.—A suggestion that the old nomenclature dealing with castration, sterilization, transplantation, etc., be discarded because of forced inconsistencies, for a new international one. Contains a useful table giving a resumé of the methods for and degrees of these concepts, together with the suggested new terminology. —*J. F. Brown* (Yale).

82. **Bethe, A. Der Einfluss der Ionen des Seewassers auf rhythmische Bewegungen von Meerestieren.** (The influence of the ions of sea water on the rhythmic movements of sea animals.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 456–467.—The influence of the calcium, potassium, and magnesium content of sea water on the amount and regularity of rhythmic movements of the lower crustacea and *Carcinus* is demonstrated and described.—*L. T. Spencer* (Yale).

83. **Boldrini, M. Sviluppo corporea e predisposizioni morbose.** (Bodily development and morbid predisposition.) *Pubbl. Univ. Cattol. Milano*, 1925, Serie VIII, **1**. Pp. 234.—The author uses military statistics to prove that there is a predisposition to health and disease, dependent upon the individual constitution, thereby supporting the constitutionalists' theories to the effect that resistance to disease is dependent upon the morphological and functional constitution of the individual. During the war it was found that there existed constitutional differences between those resisting and those succumbing to disease, the mean height of the former being less and the mean chest girth greater than those of the latter.—*R. Schwarz* (George Washington University).

84. **Bühler, Ch. Das Problem des Instinktes.** (The problem of instinct.) *Zsch. f. Psychol.*, 1927, **103**, 46–64.—A discussion of instinct in which special attention is paid to Lloyd Morgan's views. The teleology of instinctive activities cannot be considered without reference to certain problems of organic life in general. To summarize different behavior items under the term "instinct" has meaning only if these activities are viewed with regard to their outcome or goal. Instinctive activity is more than the sum of reactions to certain stimuli; it is more than "reactive regeneration and compensation;" it is a form of overcompensation and only to be understood as a symptom of the creative activity of life; it manifests itself not as a special kind of reactivity but as spontaneous activity along certain lines. On the other hand the term instinct is used with reference to certain relatively stable actions. It is ambiguous to use the term instinct for such stable actions as well as for purposiveness in organic life. Charlotte Bühler presents various reasons for separating these two meanings sharply.—*H. Klüver* (Columbia).

85. **Carlson, A. J., Smith, E. A., & Gibbins, I. The action of choline on the alimentary canal of intact dogs.** *Amer. J. Physiol.*, 1927, **81**, 431–435.—Intravenous injection of choline chloride produces the following effects upon the relatively empty alimentary canal: large doses of the drug give a slight and temporary increase in muscular tonicity of the stomach; there is usually a depression in tone and motility in the large intestine; in the small intestine, which proved more sensitive to choline than either the large intestine or stomach, a temporary depressing effect usually precedes a temporary increase in muscular tonicity.—*M. J. Zigler* (Wellesley).

86. **Cohen, S. J., & Bothman, L. Vasomotor fibers in retinal, choroidal and ciliary arteries.** *Amer. J. Physiol.*, 1927, **81**, 665–669.—*M. J. Zigler* (Wellesley).

87. **Crivellari, C. A. Sensitiveness of adrenalectomised rats to poisons.** *Amer. J. Physiol.*, 1927, **81**, 414–421.—Albino rats are most sensitive to the toxic action of potassium cyanide, nicotine, etc., at a period about two or three weeks after adrenalectomy. This hypersensitivity continues, for nicotine until 68 days, and for potassium cyanide until 52 days, after the operation.—*M. J. Zigler* (Wellesley).

88. **Fischer, M. H., & Veits, C. Beiträge zur Physiologie des menschlichen Vestibularapparates. VII. Bilateralmethoden, speziell Doppelspülungen. B. Die Pulsionsreflexe.** (Contributions to the physiology of the human vestibular apparatus. VII. Bilateral methods, especially double irrigations. B. The pulsion reflexes.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 357–388.—Following simultaneous irrigation of the two ears with warm or cold water head inclinations produce reflex adjustments of equilibrium (pulsion reflexes) except in certain positions of the head which are designated absolute indifference positions. Pulsion reflexes are in the plane of the preceding head inclination and for cold irrigations are opposite in direction to the head movement; for warm irrigations the reflex movements follow the direction of the antecedent head inclinations. In the median plane the duration of the reflexes is proportional to the sine of the angle of inclination with a maximum at 90°. In the sagittal plane maxima are found at 45° and the relation between reflex duration and angle of inclination is not so simple. Duration and direction of the reflexes are also related to the time interval between inclination and irrigation. A negative compensation appears in the time curve agreeing with the calculated velocities of the endolymph. Other conditions and complicating factors are considered. Subjective effects of the irrigation are sensations of rotation opposite to the pulsion reflexes in direction. Endolymph currents play a dominant rôle in the phenomena.—*L. T. Spencer* (Yale).

89. **Hahn, H., & Lueg, W. Neue Einzelheiten vom galvanischen Hautreflex.** (Further data on the galvanic skin reflex.) *Zsch. f. Sinnesphysiol.*, 1927, **58**, 175–187.—"(1) The observations of Hahn and I. Goldscheider leading to the result that in the frog pure temperature stimuli elicit the so-called psychogalvanic reflex markedly and regularly in a very characteristic fashion are confirmed. (2) Circumscribed temperature stimuli in warm-blooded animals, however, are entirely ineffective. (3) The innervation paths of the galvanic reflex after temperature stimulation are investigated. (4) It is considered possible to interpret the mechanisms mediating the psychogalvanic skin reflex as a primitive temperature regulation in cold-blooded animals."—*H. Klüver* (Columbia).

90. **Marine, D., & Baumann, E. J. Duration of life after suprarenalectomy in cats.** *Amer. J. Physiol.*, 1927, **81**, 86–100.—Cats survive removal of the supra-renals an average of 5.3 days. Injection of sodium salts prolongs life after the operation as much as three times that of the controls. The importance of diuresis upon the prolongation of life is emphasized.—*M. J. Zigler* (Wellesley).

91. **McGeoch, J. A. The acquisition of skill.** *Psychol. Bull.*, 1927, **24**, 437–466.—153 studies, almost exclusively limited to direct experimental approaches to the problem since January, 1917, are reviewed. Many variants from the "typical" learning curve are found. Plateaus are and are not found. Two equations for expressing a learning curve are furnished. The well known dicta on massed *vs.* distributed practice and whole *vs.* part receive only partial confirmation. The influence of special incentives is clearly shown by many. A positive correlation between intelligence and efficiency in learning is indicated by nearly all studies attacking the problem. The advantages of visual and other forms of guidance have been shown. Of the studies mentioning transfer only a few fail to evidence transfer of some sort. A few studies attack the primacy and the recency-frequency laws. Many other phases of acquisition have been approached experimentally, often with divergent findings. In comparison, few studies of retention have appeared.—*J. F. Dashiell* (North Carolina).

92. **Ocaranza, F. Los desequilibrios del sistema nervioso organo-vegetativo en relacion con los desequilibrios endocrinianos.** (The disturbances of the organo-vegetative nervous system in relation to endocrine imbalance.) *Medicina*, 1927, **8**, 1–4.—Recently much study has been devoted to the endocrine

glands and the organo-vegetative nervous system with the result that a close relationship has been discovered between phenomena derived from investigations in both fields. This relationship may be considered from two points of view. First, the sympathetic and the endocrine glands form a single system of exciting, inhibiting and directing influences, realized in the one case by means of neural pathways, and in the other by "chemical messengers," the two systems being mutually stimulative. Second, the glands of internal secretion form products which modify the tone of both nervous systems. In Addison's disease there is no pigmentation if the abdominal plexuses are not involved with the suprarenals, and in exophthalmic goiter there is always a disturbance in the vegetative nervous system. The thyroid is probably more closely related to the organo-vegetative system than any other gland of internal secretion. However, from a physiological point of view we must not forget the thesis of Gley, that the characteristic of endocrine function is independence of nervous influence. In clinical observation some endocrine disturbances have insignificant organo-vegetative involvement, in others the latter is predominant. The author concludes that while the problem is very complex, there are many reasons to break with the narrow exclusive relationship sometimes maintained.—*M. Murphy* (Pennsylvania).

93. **Scheck, M. G. Involuntary tongue movements under varying stimuli.** *Proc. Iowa Acad. Sci.*, 1925, **32**, 385–391.—By means of a pneumograph and a small rubber balloon held in the mouth a kymograph record was obtained of involuntary respiratory and tongue movements under conditions of no stimulus, writing under dictation, silent reading, and the playing by phonograph of various types of music. It is concluded that involuntary tongue movements are "very common, if not always present," and vary in accordance with the type of stimulus, and appear to coincide with the separate respiration curves.—*L. C. Ackerson* (Institute for Juvenile Research).

94. **Schmaltz, G. Über die Reizvorgänge an den Endorganen des Nervus octavus. IV. Die Beziehung der M. H. Fischerschen Pulsionsreflexe zur Strömungsgeschwindigkeit der Endolymphe.** (On the stimulus events in the end organs of the eighth nerve. IV. The relation of the pulsion reflexes described by M. H. Fischer and the velocity of the endolymph current.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 389–396.—The velocity of the endolymph current after thermal stimulation passes through zero after a certain time and then enters a negative phase. Coincidence between curves of such velocities and the course of the pro- and retropulsion reflexes reported by Fischer and Veits (see abstract 88) was demonstrated. Some relation between the physical events in the endolymph and the reflex activity upon thermal stimulation is therefore indicated.—*L. T. Spencer* (Yale).

95. **Slonaker, J. R. Semiovariectomy: compensatory hypertrophy of the remaining ovary and migration of the ova in albino rat.** *Amer. J. Physiol.*, 1927, **81**, 620–627.—Removal of one ovary in rats between 3 and 5 weeks of age produces hypertrophy of the remaining ovary to two or more times the normal size, but does not hinder normal growth and activity.—*M. J. Zigler* (Wellesley).

96. **Spencer, L. T. The curve of continuous work and related phenomena.** *Psychol. Bull.*, 1927, **24**, 467–472.—(Review of 31 titles.) Emphasis of late has been mainly on the phenomenon of the general decrement, and also on physiological evidences of fatigue.—*J. F. Dashiell* (North Carolina).

97. **Travis, L. E., Tuttle, W. W., & Hunter, T. A. The tetanic nature of the knee-jerk response in man.** *Amer. J. Physiol.*, 1927, **81**, 670–678.—Action current records of 12 normal male subjects show, without exception, periodic discharges within the latent time of the knee-jerk response. It is concluded, therefore, that this reflex is not a simple muscular contraction but a tetanic response. —*M. J. Zigler* (Wellesley).

98. **Turner, A. H. The adjustment of heart rate and arterial pressure in**

healthy young women during prolonged standing. *Amer. J. Physiol.*, 1927, **81**, 197–214.—"A system of scoring, based on observations of heart rates and arterial pressures during a prolonged period of quiet standing and control periods of reclining, has been devised which appears to give an index of the ability of the circulation to adapt itself to changes in position."—*M. J. Zigler* (Wellesley).

99. **Wand, R. A. Sudden transitory reduction in the viscosity of the blood as a cause of the fall in blood pressure in "shock."** *Amer. J. Physiol.*, 1927, **81**, 160–169.—Results of a series of experiments are presented in which records of blood pressure and of viscosity of the blood were made both before and after the intravenous injection of peptone, histamine and antigen, administered separately. All three substances produce marked reduction, although peptone, which shows reductions varying from 14 to 44%, appears to have the greatest effect.—*M. J. Zigler* (Wellesley).

100. **Woo, T. L., & Pearson, K. Dextrality and sinistrality of hand and eye.** *Biometrika*, 1927, **19** (1 & 2), 165–199.—The conclusions of Van Biervliet, Gould, Parson and others were investigated by means of measurements upon male groups ranging from 3838 to 6992 cases aged 6 to 81 years from Galton's data of 1884, stored in the Galton Laboratory. Manual dextrality was taken as the difference of strength of grip between the two hands, and ocular dextrality as the difference of visual acuity of the two eyes measured by the distance at which diamond type could be read (without glasses). Dextrality, either manual or ocular, showed no correlation with age, so that it is concluded that experience does not tend to train "sinistralists" into "dextralists." Manual and ocular dextrality showed zero intercorrelation, so that it is concluded that superiority of eye has no relation to superiority of hand. The distributions indicate "that lateralism whether ocular or manual is a continuous variate, and that dextrality and sinistrality are not opposed alternatives, but quantities capable of taking values of continuous intensity and passing one into the other." The correlation of grip for right hand and left hand was .7909 $\pm$ .0036, and for visual acuity of the two eyes, .9324 $\pm$ .0014. The quantity 1/9 which Van Biervliet concluded to be a fixed amount of the superiority of the right hand or eye in "dextralists" or of the left hand or eye in "sinistralists" is not accepted as a universal law of absolute unilateralism, but is explained technically as an approximation to certain values "which flow from any approximately normal correlation surface of high coefficient."—*L. C. Ackerson* (Institute for Juvenile Research).

[See also abstracts 14, 65, 67, 68, 72, 73, 75, 102, 108, 144, 146, 150, 199, 216, 217, 218, 226, 250.]

PLANT AND ANIMAL BEHAVIOR

101. **Detwiler, S. R. The effects of extensive muscle loss upon the development of spinal ganglia in *Amblystoma*.** *J. Exper. Zool.*, 1927, **48**, 1–14.—An experimental study of the relationship between the development of the central nervous system and the muscles and skin of the spinal levels studied. A quantitative estimate is given of the effect of skin and muscle loss. A 40% reduction of ganglion cells in the experiments, which is attributed to muscle loss, is taken as an index of the proportion of proprioceptive neurons normally present in the ganglia. A list of references is given.—*L. Carmichael* (Brown).

102. **Domm, L. V. New experiments on ovariotomy and the problem of sex inversion in the fowl.** *J. Exper. Zool.*, 1927, **48**, 31–173.—An elaborate experimental study carried out under a grant administered by Professor F. R. Lillie for the Committee for Research in Problems of Sex of the National Research Council. The material used was the brown Leghorn fowl. Studies upon the following topics are reported in detail, with tables and photographs: the

effect of complete ovariotomy with the compensatory growth of the right gonad, the regeneration on the site of the left ovary, the effect of ovariotomy on accessory organs of reproduction, and the effect of ovariotomy on secondary sexual characters. Some consideration is also given to the effect of incomplete ovariotomy and of secondary operations. The effects of variotomy upon voice and behavior are given in detail, and the relation of the observed facts to the psychology of instinct is suggested. A list of references is given.—*L. Carmichael* (Brown).

103. **Eidmann, H. Ameisen und Blattläuse.** (Ants and plant lice.) *Biol. Zentbl.*, 1927, **47**, 537–556.—Interesting new facts about the ant and plant lice trophobiosis, collected with the aid of von Frisch's marking method. Among them: (1) The aphids winter under control of the ants. (2) Certain definite ants act as herders and remain with the aphids all day. (3) The others are photophobic and visit aphids chiefly at night. (4) The brood of aphids greatly outnumbers the ants who keep them. There is a short survey of other work on this problem and an incomplete bibliography.—*J. F. Brown* (Yale).

104. **Hertz, M. Bewegungen von Kohlweisslingen über einen Feld.** (Movement of cabbage butterflies over a field.) *Biol. Zentbl.*, 1927, **47**, 569–570.—The writer observed that in the distance of about 2 m. from a white seed tuft of the dandelion, these butterflies change their otherwise steady flight and go toward the dandelion up to about 20–40 cm. She holds that this behavior is due to false visual perception of mate and subsequent reaction due to lack of smell stimulus. The original stimulus seems to be contrast between the white of the tuft and surrounding environment, an accidental observation which upholds the experiments of Knoll.—*J. F. Brown* (Yale).

105. **Hunter, W. S. Further data on the auditory sensitivity of the white rat.** *Ped. Sem.*, 1927, **34**, 177–186.—To test rats for sensitivity to tones, Hunter first trained them in a T-maze to take the right turn when a noise (buzzer) was being sounded and to take the left when no sound was being produced; then the noise of buzzer was replaced by degrees with a tone having very little noise (tuning fork struck by rubber hammer). When the noise component was reduced to a minimum the animals showed no ability to take the correct turn.—*J. F. Dashiell* (North Carolina).

106. **Hunter, W. S. The behavior of the white rat on inclined planes.** *Ped. Sem.*, 1927, **34**, 299–332.—Crozier and Pincus (abstract 1096) had found that the rat when placed upon an inclined plane exhibited negative geotropism in a highly definite way: as the angle of inclination of the plane increased the angle of upward orientation and path of the animal upon this plane increased and the variability of the latter decreased. (Taking α as the angle of inclination of plane and θ as the angle of orientation made by the animal, they stated that the values of θ are directly proportional to the log sin α, and that cos θ decreases in direct proportion to sin α. Further they stated that on orienting the animal first assumes a quite definite angle and then progresses in a straight line.) Results from Hunter's work with very young animals from different stocks just before and just after opening their eyes, and with blind animals, suggest that there may be a linear relationship in each case, but that this relationship is by no means so definite. For one thing, at certain values of α and of θ many animals fell and their records were obscured. Furthermore, the mean value of θ at a given value of α is misleading as an index of the actual distribution of the animal's reactions. The most that can be safely predicted is that rats will tend to react negatively to gravity.—*J. F. Dashiell* (North Carolina).

107. **Kroh, O. Weitere Beiträge zur Psychologie des Haushuhns.** (Further contributions to the psychology of the hen.) *Zsch. f. Psychol.*, 1927, **103**, 203–227.—Kroh reports some experiments on hens conducted in collaboration with W. Goetz, R. Scholl, and W. Ziegler. The chief aim was to determine the after-effects of training in situations "which were materially different from the

situation during training." For example, after the animal had been trained to eat the larger of two grains of corn under certain conditions, the same stimuli were presented out of doors instead of indoors or on grounds of different size or on the floor. The result was that the animal chose the larger grain in these situations. If pairs consisting of one large and one small grain were placed in different corners of the room, only the larger grain of each pair was eaten. Confronted with three grains of different size, only the two larger ones were chosen. When two large and two small grains were placed side by side (six different arrangements) the smaller grains were not taken. When the two grains were replaced by two grains of wheat or by two pieces of meat or bread, the hen took the smaller object no matter what its form and color happened to be. It is pointed out that these reactions to the size-relation brought out in various experiments cannot be explained by transitional experiences or by the *Zueinander* of *Gestalt* psychology. The experiments in which geometric figures were employed showed that the hens were able to distinguish triangles from squares, circles, etc. In spite of the fact that the hens were trained with equilateral triangles, they treated right, scalene, etc., triangles in new situations as triangles. Some hens even "identified" an equilateral triangle placed upside down without any difficulty. W. Goetz showed that hens are able to distinguish pentagons and hexagons. It is stated that reactions to biologically unimportant forms such as geometric figures seem to be unnatural to hens. Trials conducted four months after the training with two grains of corn showed that in "some" hens the training was still effective (no errors).—*H. Klüver* (Columbia).

108. **Lillie, F. R. The present status of the problem of "sex-inversion" in the hen: comments on Doctor Domm's paper.** *J. Exper. Zool.*, 1927, **48**, 75–96.—This paper is based upon that by Domm abstracted elsewhere (abstract 102). The literature of the subject is reviewed and a working hypothesis to account for the phenomena of sex-inversion is proposed.—*L. Carmichael* (Brown).

109. **Thieulin, G. Recherches sur le globe oculaire et sur la vision du chien et du chat.** (Researches on the ocular globe and the vision of the dog and the cat.) Paris: Danzig, 1927. (Thèse vétérinaire.) Pp. 100.—The eye of the dog is brachyophthalmic; that of the cat is dolichophthalmic. The average optical opening in the dog varies from 12.5 mm. to 15.5 mm.; that of the cat is a little larger and reaches 16 mm. The angular value of the transparent cornea is a little lower in the dog; the retinal cupule in the dog, on the contrary, is better developed than in the cat. The crystalline lens of the cat is larger than that of the dog. The maximal angular value of the anatomical monocular visual field of the dog is determined by the horizontal meridian or a meridian making with it an angle of 15–20° at the bottom and outside. This value reaches 191° in the dog and 205° in the cat. In the dog the rods and cones are homogeneous throughout the visual membrane (1 cone for 17 or 18 rods). In the cat the cells for vision are more fine and compact. With the cat there is a zone on a level with the area centralis, 1 mm. in width, which evidently does not contain cones; in the immediate approach to this region, there is 1 cone for 20 rods, and on a level with the equatorial zone there is 1 cone for 25 rods. There is little or no retinal purple in the retinas of the cat and dog. The ease with which they get around in the dark is explained by (1) a wonderfully diaphragmic optical system, (2) tactile organs of great delicacy. The size of the retinal images is apparently similar in the dog and the cat. Refraction is more exact in the cat. By reason of the greater development of the preretinal segment, the eye of the cat is more adapted to nocturnal vision than that of the dog.—*Math. H. Piéron* (Sorbonne).

[See also abstracts 38, 95, 114, 116.]

EVOLUTION AND HEREDITY

110. **Hultkrantz, J. W., & Dahlberg, G. Die Verbreitung eines monohybriden Erbmerkmals in einer Population und in der Verwandtschaft von Merkmalsträgern.** (The incidence of a monohybrid hereditary character in a population and among the relatives of the character bearers.) *Arch. f. Rassen- u. Gesellschbiol.*, 1927, **19**, 129–165.—If the number of character bearers in a population is known, the number of homozygotes and heterozygotes in the population can be calculated. The authors have worked out formulas for the hereditary structure of the population for varying frequencies of character bearers. A condition of these formulas is that no selection occurs. If selection takes place, other proportions of character bearers will arise, and the authors also have worked out formulas by which can be calculated the alteration in the composition of the population which occurs if recessive character bearers are prevented from conception. If an abnormality exists in for instance 0.1% of a population, consistent sterilization must be carried through during more than ten generations in order to reduce the figure to half. Formulas are then worked out for the hereditary structure of the relatives of dominant and recessive character bearers. It thus appears that on the one hand parents and children, and on the other grandparents, grandchildren, brothers and sisters of the parents and finally also parents of the grandparents, brothers and sisters of the grandparents and cousins once removed have the same percentage of character bearers. If the hereditary structure of the population is known, the number of character bearers in the different categories of relatives can be calculated. A supplementary table shows, for instance, that if there are 1% of character bearers in a population, there may be expected, in the case of recessivity, 30.25% of character bearers among the brothers and sisters, 10% among children and parents, etc. In the case of dominance there should be found, under similar circumstances, 50.38% of character bearers among parents and children, and 13.34% among parents of the grandparents, children of the grandchildren, cousins once removed, etc. The authors emphasize the importance, in heredity investigations, of taking into account the composition of the population from which the material is collected.—*G. Dahlberg* (Upsala, Sweden).

111. **Pearl, R. The biology of superiority.** *Amer. Mercury*, 1927, **12**, 257–266.—The current eugenic doctrines are strongly criticized; they are chiefly propaganda, and markedly out of touch with the factual findings. Like does not produce like, but only recombinations which may or may not resemble the parent. There are two complementary methods of genetic investigation in man—to examine the parents of superior individuals, and to examine their children. Pearl has done this for the individuals to whom a minimum of a page is devoted in the current Encyclopedia Britannica; only the philosophers (N = 63) and the poets (N = 85) are considered here. In the former group, three parents were sufficiently distinguished to obtain separate biographic notice, and the parents as a whole were about an average distribution; of the eighteen who had children those of three were accorded separate notice. The case is similar for the poets. Eugenic propagandists "would have urged a good half of the fathers to curb their reproductive rate in the interest of the 'race.'" It is pointed out that these results are objectively much like Galton's—hence that the latter were far from warranting the far-reaching policies that have been advocated in their name. "The facts are in full accord with the expectation from established genetic principles, and not at all in agreement with current eugenic dogma."—*R. R. Willoughby* (Clark).

112. **Willoughby, R. R. Family similarities in mental-test abilities.** *Genetic Psychol. Monographs*, 1927, **2**, 235–277.—11 tests were used to measure the following abilities: antonym-synonym discrimination, number series and

symbol completion, science-nature and history-literature information, arithmetic reasoning, vocabulary recognition, relationships of simple geometric forms, perception of verbally presented analogies, and digit-symbol substitution. Age curves for the various tests are presented and show the degree and rate of senescent decline of the abilities tested, the age of maturity, and the degree to which the ability is the result of heredity or training. Familial correlations for the tests used give an average of .4. The suggestion is offered that the effect of environment in the determination of these abilities "is equal to or possibly a little less than that of inheritance." The results bring out clearly the exceedingly complex nature of the problem and the necessity for many further studies from a variety of different angles. The paper includes a brief historical account of the problem and a bibliography.—*M. Meenes* (Lehigh).

[See also abstracts 102, 108, 179.]

SPECIAL MENTAL CONDITIONS

113. **Angyal, A. Der Schlummerzustand.** (The slumber state.) *Zsch. f. Psychol.*, 1927, **103**, 65–99.—The author attempts a psychological characterization of the different periods of the slumber state on the basis of his own observations and of observations reported by other persons. In the first period intellectual and volitional functions and determining tendencies suffer. There is a decrease in sensory sensitivity. Words are misunderstood or not heard. Images become more distinct and richer in detail. This period is either followed by dreams or by a second period in which thought seems to be entirely banished; images are not connected with meanings; feelings are absent. In the third period the various characteristics of the dream-consciousness are present; olfactory and gustatory images seem to be absent. The main part of the study is concerned with a description and an analysis of the various forms of imaginal activity in the different periods of the slumber state. The author pays particular attention to Karl Bühler's views on the dream.—*H. Klüver* (Columbia).

114. **Blagoveschenskaya, V. P., Belova, L. A., Kanicheva, P. A., Fedorova, —, & Schelovanov, N. M.** [Concerning the development of sleeping and waking in dogs.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, **2**, 309–337.—The present work forms one of a series of investigations on the comparative study of the first stages of the ontogenesis of nerve-activity—of the behavior and the general conditions (of sleep and waking) in man and animals. The principal content of the work is a summing up of the factual data. Upon comparing the data herein contained on the waking, sleep and behavior of pups with the results previously arrived at by the extirpation and stimulation methods on the development of their brain functions, the following periods are established for the development of sleep and waking in the dog: First—from birth to the 5th or 7th day—is a period of disorganization of the mechanisms of sleep and waking; second—from the 5th or 7th up to the 24th day—is a period during which sleep is fully developed, while waking still lacks some of its essential elements; third—after the 20th day—is the period of comparatively rapid development of waking, and by the 35th day the rhythm between sleep and waking is fully developed, sleep predominating during the night and waking during the day. The further work on this topic being carried on in the Section on Development of the Institute for the Study of the Brain is in the following direction: (1) investigating sleep and waking in other animals and children up to the 1st year; (2) parallel study in the same animals of the cell and myelin structure of the brain; and (3) analysis of the comparative significance of external (influence of temperature and of optic and acoustic environment) and internal (biochemical) factors which determine the change from sleep to waking.—*A. L. Shnirman* (Leningrad).

115. **Bouyer, H. L'état mental des hallucinés et ses deux facteurs.** (The mental state of persons having hallucinations and the two factors involved.) *Encéph.*, 1927, **22**, 444–456.—Under the name of the hallucinatory state two different things are grouped. First, there is a preliminary psychical attitude capable of assuming in different subjects various affective forms (belief, desire, fear, obsession). This manifests itself by the abatement of normal activity and by concentration of the attention on inner, preferential images. This attitude is an hallucinatory disposition. Second, there is a state of global physiological origin, a diffuse disorder incidental to intelligence, in harmony with an injury of organic conditions, which hardly varies except in degree and presents pretty nearly the same appearance in all subjects. This is the state properly called hallucinatory. The part played by these two factors is inversely proportional, for the second, as it develops, suppresses more and more the first factor.—*Math. H. Piéron* (Sorbonne).

116. **Bozzano, H. Les manifestations métapsychiques et les animaux.** (Metapsychic manifestations and animals.) Paris: Meyer, 1926. (Bibliothèque de philosophie spiritualiste modern et des sciences psychiques.) Pp. 195. 9 fr. —Metapsychic manifestations in animals are of several kinds: there are phenomena of telepathy in which animals play the rôle sometimes of percipient, sometimes of agent. There are animal perceptions of phantoms perceived at the same time by man. There are materializations of animals with post-mortem appearance of identified animal phantoms. Two hypotheses have been proposed to explain these facts: (1) that according to which psychic perceptions originate from an hallucinatory phenomenon created by centers of idealization in a human being and later transmitted to the animal. (2) That which admits a pure and simple hallucinatory phenomenon of the percipient individual. The author believes he can conclude, after the analysis of 130 cases, that these two hypotheses are insufficient to explain all the facts, and he assumes the existence of a depository animal subconscious with the same supra-normal faculties which exist in human consciousness; and he believes that all this contributes to prove the reality of the existence of the survival of the animal "psyche." No bibliography.—*Math. H. Piéron* (Sorbonne).

117. **Chadwick, M. Die Gott-Phantasie bei Kindern.** (The God fantasy in children.) *Imago*, 1927, **13**, 383–394.—Identification with God the creator, and subsequent self-punishment is illustrated by two cases (a boy and a girl) with obsessional-neurotic symptoms. Their ideas and rituals show close similarity to those of primitive men. Their anxiety about death apparently preceded their castration anxiety.—*C. Moxon* (San Francisco).

118. **Conklin, E. S. Principles of abnormal psychology.** New York: Holt, 1927. Pp. vii + 457. $4.50. (Students' ed. $3.60.)—This is intended primarily as a textbook for advanced undergraduates and is designed to introduce students to the psychology—apart from the treatment—of abnormal behavior. An attitude of detachment is maintained in the presentation of theories and interpretations. Before describing abnormal forms of behavior, the concept of the normal mind, as being necessary for perfectly normal behavior, is developed. Abnormalities are regarded as due to either functional or organic disturbances, or both. From a discussion of abnormal behavior due to slight deviations in bodily structure or sensory organs the author proceeds to a discussion of psychoses and psychoneuroses. The discussion of borderland phenomena—hypnotism, spiritism, dreams, etc.—is taken up after information has been given as to the observance of the more extreme forms of abnormal behavior. The material presented in the book is not, the author points out, exhaustive; but it endeavors to give a clear picture of the abnormal field and includes considerations of all the significant typical abnormalities. Reference titles are given at the close of each chapter.—*M. Goodrie* (Clark).

119. **Daly, C. D. Hindu-Mythologie und Kastrationskomplex.** (The mythology and castration complex of the Hindus.) *Imago*, 1927, **13**, 145–198.—Evidence of specially intense castration trauma, fear of death and hate of the mother among the Hindus. The destroying mother-goddess Kali shows the tendency to hide the mother's genital as organ of birth and menstruation. The importance of menstruation tabus has been underestimated. A phylogenetic factor is assumed for the feminine inferiority feeling due to menstruation tabus. Psychoanalytic reasons are given for the heads, forearms, the mouse and the hibiscus associated with Kali. Man's sexual desire for the woman at her menstrual periods and the consequent death anxiety caused the most serious conflict that men had to fight.—*C. Moxon* (San Francisco).

120. **Ellis, H. Man and woman: a study of human secondary sexual characters.** (6th ed.) London: Black, 1926. Pp. xxiii + 563. $4.50.—No changes have been made in the body of this work, as the author considers the data as significant and valid as when first published. In a new preface he defends his position concerning the "comparative variational tendency in men and women." —*M. Goodrie* (Clark).

121. **Freud, A. Einführung in die Technik der Kinderanalyse.** (Introduction to the technique of child analysis.) Vienna: Internationaler Psychoanalytischer Verlag, 1927. Pp. 87.—Four lectures given before the institute of the Vienna Psychoanalytic Association. The author believes that a situation analogous to the analytic situation with adults is impossible to achieve with children. (She is dealing here with children between the ages of 6 and 11.) The first lecture deals with the introductory phase of child analysis and describes the methods used in securing a positive transference. A case is given to illustrate how anxiety in a child may be used by the analyst as a help in attaining his goal. The second lecture is a discussion of the methods used in child analysis proper. Not only the child's own accounts but also hints given by his family are used as analytic data. In addition, dream interpretations are used—both night dreams and day phantasies—and material offered in free drawings. The child does not respond to the free association method as does the adult. The third lecture gives the author's views on the place of transference in child analysis. It is through positive transference that the best work can be done with children. This transference may be satisfactory, but there is no neurosis connected with it, as the child is not yet ready to give up his parents as love objects. The fourth lecture deals with the relation of child analysis to education. In the author's mind this should be very close, because of the weakness of the child's super-ego and the consequent danger of bringing complexes to the surface unless they are controlled by educative factors.—*M. Goodrie* (Clark).

122. **Freud, S., & Eitingon, M. Concluding remarks on the question of lay analysis.** *Int. J. Psychoanal.*, 1927, **8**, 392–401.—The question discussed by members of the International Psychoanalytical Association in the previous issue of the Journal, and here summed up, is whether the Association shall officially approve and train non-medical analysts to work under medical supervision and consultation after previous medical diagnosis of the patients' symptoms. Freud holds that in the majority of cases the physician's help and medical knowledge are unnecessary; that psychoanalysis is not a particular branch of medicine but a part of general psychology. The best training for analysts is not that prescribed for physicians. Medical training gives the analyst much that is indispensable, but burdens him with much that is useless for him and tends to deflect his interest from mental phenomena. Freud is not certain whether the doctors' desire to possess psychoanalysis as a monopoly is due to the desire to preserve or to destroy it. In any case he thinks it unpractical and equivalent to an attempt at repression. Eitingon gives the report of the training commission on the subject.—*C. Moxon* (San Francisco).

123. **Frobenius, K. Über die zeitliche Orientierung im Schlaf und einige Aufwachphänomene.** (On time orientation in sleep and some phenomena of awakening.) *Zsch. f. Psychol.*, 1927, **103**, 100–110.—Many people report that they are able to awake from sleep at any hour of the day or night. With regard to this question, experiments were carried on with five adults over a period of 100 successive nights and for 150 nights interspersed with non-experimental nights. A certain time was fixed at which the subject was to awaken. The duration of the sleep period was varied, and the influence of time-measuring instruments was determined. One of the chief results was that most sleepers awoke during the five minute interval preceding the time point intentionally fixed before sleep. Such an awakening was not dependent on external conditions nor was exercise of any importance. The number of cases awakening before and after the five minute interval was about the same. Experiments on a chemist who was exposed to odoriferous substances during sleep brought out that such biologically unimportant, though in some cases very intensive smell signals did not lead to awakening. In another series of experiments dynamometric determinations were made upon awakening.—*H. Klüver* (Columbia).

124. **Fromm, E. Der Sabbath.** (The Sabbath.) *Imago*, 1927, **13**, 223–234.—The work forbidden on the Sabbath is symbolic of incest (mother-earth—matter, materia, mater). The element of punishment, expiation for and defense against incest covers the wish-fulfilling tendency to return to the intra-uterine paradise by feeling at one with nature. The word for penitence on the day of atonement (Teschuba) means return (to the womb). The primal satisfaction from the mother is also projected into the messianic age.—*C. Moxon* (San Francisco).

125. **Fromm-Reichmann, F. Das jüdische Speiseritual.** (The Jewish food ritual.) *Imago*, 1927, **13**, 235–246.—A psychoanalytic explanation by the help of Freud's "*Totem and Tabu*," "*Zwangshandlungen und Religionsübungen*," *Gesammelte Schriften*, Bd. X, Abraham's article on the day of atonement (*Imago*, Bd. IV), and Reik's "*Probleme der Religionspsychologie.*" The clean animals have the capacity to form horny substance like the assumed Jewish totems—the bull and the ram. The milk tabus are a defence against mother-incest. The breaking of such tabus in analysis releases sexual excitations.—*C. Moxon* (San Francisco).

126. **Geijerstam, E. Anförvanternas roll i den psykoanalytiske kuren.** (The rôle of relatives in the psychoanalytic cure.) *Svenska läkartidn.*, 1927, **35**, 1012–1017; **36**, 1034–1035.—It is a well known fact that the neurotic never completely wishes to get well. The result is that he never completely resigns himself to the cure. A fact not so commonly recognized is that relatives are likewise not always completely willing that the patient should recover. They recognize instinctively that the neurotic does not wish to recover, with the result that they unconsciously hinder his struggles with his own symptoms. In a large number of cases the father or mother or both, in the patient's fancy, have held positions of authority which have forbidden the satisfaction of a desire or imposed the performance of a duty. The patient, in a sense, has modeled himself on the pattern of this authority and in this way has developed in his psyche a critical consciousness toward his own behavior. Interference of relatives falls, therefore, on prepared soil and supports this attitude of self criticism, with the result that the patient becomes worse instead of better. In some cases this interference of relatives is unconscious; in others, it may become a positive opposition to a program of treatment. The author illustrates in detail by several case-histories the influence of relatives on the success of the psychoanalytic treatment.—*C. T. Pihlblad* (Wittenberg).

127. **Ginzburg, B. Psychical research.** *New Int. Year Book*, 1926, 624–625.—A review of the Clark University symposium, "The case for and against psy-

chical research" (Vol. I, Abstract 1716), with a bibliography of new books on psychical research.—*M. Meenes* (Lehigh).

128. **Ginzburg, B. Psycho-analysis.** *New Int. Year Book,* 1926, 625–626.—Necrology, brief summary of Freud's position, and bibliography of recent literature.—*M. Meenes* (Lehigh).

129. **Goodhue, M. L. The cure of stagefright.** Boston: Four Seas, 1927. $2.00.—Stagefright is said to be due to an accumulation of impressions of inferiority induced by negative emotions resting deep in everyone's subconsciousness, and its cure to be found in autosuggestion and conscious relaxation.—*D. L. Bidwell* (Ohio State).

130. **Johnson, H. M. The measurement of sleep.** *Hospital Progress,* 1927, **8,** 361–363.—An abstract of a lecture on the experimental work done on sleep at the Mellon Institute, and not yet published in detail. A recording instrument attached to the bed registers each major change of bodily position along with the time of its occurrence. The temporal intervals between successive periods of activity were measured on twenty-four experimental sleepers who were under observation during the greater part of the academic year. Comparisons are made of individual differences; of the effects of systematic variables, such as the time of retiring, the duration of the stay in bed, changes in the daily habits of the patient, systematic worries, diseases, such as influenza, and various types of bedding equipment; of seasonal effects; and of the distribution of rest and activity over the time spent in bed, which is rhythmic. The results of certain so-called tests of fatigue are briefly summarized.—*H. M. Johnson* (Mellon Institute).

131. **Jones, E. Das Mutterrecht und die sexuelle Unwissenheit der Wilden.** (Mother-right and the sexual ignorance of savages.) *Imago,* 1927, **13,** 199–222.—Evidence from symbolic rites and beliefs shows that ignorance of the man's rôle in conception is due to repression. Jones' hypothesis closely connects this ignorance with mother-right, both being due to the hate of the growing boy against the father (Oedipus complex). Criticism of Malinowski's view (*Psyche,* Vol. V) that the nuclear complex in the matrilineal family system is not the Oedipus complex of our society. After reviewing other theories of the mother-right system, Jones concludes that the loved sister and the hated uncle are a secondary defence against the original Oedipus complex.—*C. Moxon* (San Francisco).

132. **Klein, M., Riviere, J., Searl, M. N., Sharpe, E. F., Glover, E., & Jones, E. Symposium on child analysis.** *Int. J. Psychoanal.,* 1927, **8,** 339–370.—Adverse criticism of Anna Freud's views on the technique of child analysis. The Oedipus complex must be thoroughly analyzed together with its anxiety and guilt in order to get improved relations at home and at school. The analytic situation and the transference neurosis can be analytically established. Educational means must be excluded. The analysis helps not only cases of obvious mental disturbance and faulty development, but also diminishes the difficulties of normal children. The ego-ideal is by no means weakly developed in the child: there is no danger after analysis of outbreaks of unsocial behavior or hostility to parents. Fear to tell the analytic truth to the child is a sign of unexplored repressions in the analyst's infantile super-ego.—*C. Moxon* (San Francisco).

133. **Lampl de Groot, A. Zur Entwicklungsgeschichte des Ödipuskomplexes der Frau.** (The development of the woman's Oedipus complex.) *Int. Zsch. f. Psychoanal.,* 1927, **13,** 269–282.—The first love object of the little girl is the mother. The girl's feeling that, without a penis, she is at disadvantage in making love to the mother, contributes to the envy of the male, the more intense female jealousy, the resentment against the mother when she is held responsible for the lack of a penis, and the prostitute wish expressing revenge. The positive Oedipus complex succeeds the negative form connected with the love of the mother. The castration complex therefore does not precede the whole Oedipus

complex in the girl (as Freud holds) since it is itself a secondary formation with the negative Oedipus attitude as its forerunner.—*C. Moxon* (San Francisco).

134. **Malinowski, B. Sex and repression in savage society.** New York: Harcourt Brace, 1927. Pp. xiv + 285. $3.50.—An attempt at a collaboration between anthropology and psychoanalysis. The first two parts were written much earlier than the last two, and the conclusions "are couched in a terminology more psychoanalytic than the author should like to use now." Part I is a study of the variations in the "nuclear family complex" in a typical patrilineal (European) and a typical matrilineal (Melanesian) society. In the matrilineal group the characteristics of the "matrilineal complex" are found to be very different from those of the Oedipus type: the maternal uncle takes the place of the father; there is no left-over infantile craving for the mother; the repressed incest desire is directed against the sister. In Part II is traced the influence of the matrilineal complex upon Melanesian culture. Myths, dreams, and folklore reveal frequent accounts of incest between brother and sister and of hatred between nephew and maternal uncle. In Part III there is a discussion of the criticisms made upon points in Parts I and II (previously published) by Dr. Ernest Jones; and a critical analysis of the psychoanalytic views that result from the concept that the "Oedipus complex is the primal cause of culture." The author believes that the nuclear family complex is a maladjustment rather than a creative principle and that it "assumes a less harmful form under mother-right than under father-right." Part IV is a study of "instinctive endowment correlated with the transition from nature to culture," and is regarded by the author as the most important, though most debatable, part of the book. In conclusion the author states the advantages to anthropologists of a knowledge of the psychoanalytic theory, provided it "be taken as an inspiration and a working hypothesis and not as a system of dogmatic tenets."—*M. Goodrie* (Clark).

135. **Rado, S. Eine ängstliche Mutter. Beitrag zur Analyse des Ichs.** (An anxious mother. A contribution to the analysis of the ego.) *Int. Zsch. f. Psychoanal.*, 1927, **13**, 283–289.—The over-anxiety is a projection of the mother's unconscious hostility. By acting in accordance with her cruel ego-ideal, she hides from herself the fact that she is the danger to the child, and so preserves and increases her self-feeling. Self-feeling is increased by denying reality (psychosis), by merging the ego with the super-ego (mania), and is decreased by the melancholic hunger for the mother's love.—*C. Moxon* (San Francisco).

136. **Reik, T. Dogma und Zwangsidee.** (Dogma and obsessional ideas.) *Imago*, 1927, **13**, 247–382.—Reik gives a detailed account of the development of the dogma of the godhead of Christ in order to show that dogma is the most important expression of the people's obsessional thinking, with the same mechanisms as the obsessional neurosis of individuals. This dogma is a compromise between the repressing and the repressed, an expression of the ambivalent attitude of revolt and obedience transferred from the father to God. Other obsessional-neurotic mechanisms are the displacement on to a detail, unconscious doubt and mockery, the element of nonsense and the tabu on thought, the secondary elaboration in rational theology, the opposite convictions of faith and reason on the same point, the belief in marvels, the return of the repressed aggressive tendency against which the dogma was meant to be a defence (e. g. threat of hell-fire), and the dogmatic control upon conduct.—*C. Moxon* (San Francisco).

137. **Roheim, G. Mondmythologie und Mondreligion.** (Moon mythology and moon religion.) *Imago*, 1927, **13**, 442–537.—A study of forty variants of moon myths showing the water-carrier motive and such symbols as the tree, the hare, the endless threads, the spinner, the toad and the tortoise. These myths are a projection of human dreams (the immediate stimulus to which was probably the desire to urinate or to drink). Rank's "Die Symbolschichtung im Weck-

traum," *Jahrbuch für Psychoanalyse,* Bd. IV., is here followed. The flood myths are connected with birth. The regression to the oral and the intra-uterine phases is a defence against the threatened emergence of anxiety or guilt. Banishment to the moon is a punishment, for example, as is endless work; menstruation is a factor in the womb symbolism—water, pail, toad, etc. The waning moon suggests loss of power (castration), the new moon the unreality of the fear. "The Golden Bough" is relevant here. Behind the phallic symbolism of the moon lies the deeper meaning of the mother "castrated" by menstruation in order once more to be less dangerously accessible. While the hero in the myths of removal to the moon is often a man, the moon itself is usually the mother.—*C. Moxon* (San Francisco).

138. **Rorschach, H. Zwei schweizerische Sektenstifter.** (Two Swiss founders of sects.) *Imago,* 1927, **13,** 395–441.—The pathological sexualizing of religion is shown in the beliefs and deeds of the neurotic Johannes Binggeli (born 1834) and his schizophrenic predecessor Anton Unternährer, who died ten years before Binggeli's birth.—*C. Moxon* (San Francisco).

139. **Scripture, W. E. Ein Einblick in den unbewussten Versmechanismus.** (A glimpse into the unconscious verse mechanism.) *Zsch. f. Psychol.,* 1927, **102,** 307–309.—Scripture had to translate a verse from German into English. His translation proved to be quite unsatisfactory. Then he left the work to the unconscious. The verse produced by the unconscious was far superior to the first one. The importance of the unconscious verse mechanism was also brought out by questionnaire returns obtained from poets and writers in England and Germany.—*H. Klüver* (Columbia).

140. **Zulliger, H. Unbewusstes Seelenleben.** (Unconscious mental life.) Stuttgart: Franckh'sche Verlagshandlung, 1926. Pp. 88.—Psychoanalysis for physicians and teachers. Psychoanalytic interpretation of slips of the tongue and pen, suppression of desires and drives, memory derangements, dream states and symbols, infantile sexuality and sexual development with special reference to class room situations. Illustrated.—*M. Mcenes* (Lehigh).

141. **Zulliger, H. "Totemmahl" eines fünfeinhalbjährigen Knaben.** ("Totem meal" of a 5½ year old boy.) *Imago,* 1927, **13,** 538–540.—After observing his father fighting with his mother, the boy is emotionally aroused, runs out, kills, cooks and eats a cock as a father-substitute, compelling his sister to share his guilty meal.—*C. Moxon* (San Francisco).

[See also abstracts 8, 87, 151, 153, 162.]

NERVOUS AND MENTAL DISORDERS

142. **Armour, D. Surgery of the spinal cord and its membranes.** *Lancet,* 1927, **212,** 691–697.—This is the third Lettsonian Lecture in 1927. It is too detailed for adequate condensation, but the following topics are treated: Surgical measures for the relief of pain, Section of the posterior roots, Partial division of the spinal cord, Section of the anterolateral column, Anatomy, The sensory apparatus of the spinal cord, Conduction of painful impulses, Localization in the Anterolateral column, Section of the anterolateral tract, A new operation (i.e. a new method of performing cordotomy), and a discussion of telangiectosis or varicocele of the spinal cord with a description of the pathology of the condition and the diagnosis and treatment. The lecture is illustrated.—*W. T. Heron* (Minnesota).

143. **Ford, F. R., & Schaffer, A. J. The etiology of infantile acquired hemiplegia.** *Arch. Neur. & Psychiat.,* 1927, **18,** 323–347.—After defining the clinical group with which the paper deals and outlining some of the principal theories of the etiology and morbid anatomy, the authors review the literature of cases

of infantile hemiplegias following acute infectious diseases (pertussis, diphtheria, scarlet fever, etc.), as well as cases of infantile hemiplegias in apparently healthy children. A discussion of the relation to poliomyelitis, to epidemic encephalitis, to miscellaneous infections, and to convulsions, congenital vascular abnormalities and non-septic sinus thrombosis is followed by a report of 43 cases from the Harriet Lane Home. A study of the pathologic anatomy of infantile hemiplegias gives rise to the following conclusions: (1) it seems possible to state definitely that the infantile hemiplegias that are associated with the acute infectious diseases are due to vascular lesions; (2) final conclusions cannot yet be reached concerning the cause of the hemiplegias that occur in apparently healthy children (the obvious assumption of encephalitis is not supported by anatomic evidence). —*L. M. Hatfield* (Boston Psychopathic Hospital).

144. **Harris, J. S. Patellar reflex in epidemic encephalitis.** *Lancet*, 1927, **212**, 968–970.—This article gives a graphic and descriptive comparison of the knee-jerk in the normal subject and those suffering from encephalitis. Thirteen out of eighteen diseased cases which were examined gave knee-jerks which varied from the normal. The remaining five gave normal reflexes. The variations from the normal, which were classified into three different classes, were all apparent as muscular rigidity to a more or less marked extent. The author gives various theories concerning the interpretation of both the normal and abnormal patellar reflexes. The effect of the drug hyoscine upon the reflex was also studdied. It was found that the drug has little or no effect upon the normal reflex but that it caused the abnormal reflexes in the cases of encephalitis to approximate the normal. A few cases of katatonic dementia praecox were also examined. It was found that the form of their knee-jerk approximated that obtained from one class of the encephalitic patients, but the administration of hyoscine did not cause the reflex in these cases to approach the normal.—*W. T. Heron* (Minnesota).

145. **Higier, H. [The direction of the development of internal medicine in recent years.]** *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 37–70.—The author discusses the basic principles of the development of internal medicine in the last quarter century, both as a theoretical science and as a practical art, including the neurological-psychiatric branch.—*A. L. Shnirman* (Leningrad).

146. **Kantorovich, N. W., & Lukina, A. M. [The formation of association reflexes in progressive paralysis.]** *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, **2**, 369–380.—In progressive paralytics with clearly marked symptoms (irrespective of the form of the paralysis) the formation of the association reflex is possible only on the basis of the past experience of the patient or the revival of old connections, in which the command may be effective in arousing the reaction previously determined by it. At the same time no new connection patterns are formed (such as an association reflex to an electrocutaneous stimulus, which has no analogue in the individual's past experience). In the expansive form of paralysis the association reflex is more quickly acquired, and is more constant and better differentiated than in the dements. The force of the motor reaction is also greater in the expansive form than in dementia. During the acquisition of the association reflex a great many auxiliary reflexes are observed, which may be explained by reference to the peculiar condition of the paralytic central nervous system, without the necessity of invoking external stimuli. Auxiliary reflexes are particularly prominent in the dementia form. The evoked or independently arising excitation process has marked constancy and is capable of irradiation. A decrease of sensitivity to electrocutaneous stimulation is observed in all paralytics; independent of this is a decrease in the defense reflex. In addition to motor

auxiliary reflexes in the narrow sense, speech reflexes may be noted. The latent association period is markedly lengthened in paralytics.—*A. L. Shnirman* (Leningrad).

147. **Kline, G. M. Presidential address.** *Amer. J. Psychiat.*, 1927, **7**, 1–20.—This address, delivered before the American Psychiatric Association, touches upon recent developments and advances in psychiatry, the extension of its field of usefulness to such activities as the mental hygiene program, social service and occupational therapy, and deals with problems of importance to this branch of medicine.—*E. N. Brush* (Boston Psychopathic Hospital).

148. **Lord, J. R. The clinical study of mental disorders.** London: Adlard, 1926. Pp. 82. 6/–.—This study is a full reprint of the Presidential Address delivered at the 85th Annual Meeting of the British Royal Medico-Psychological Association. After a concise statement of the aims and general organization of the Association, Lord puts in a sustained plea for the fuller recognition of the importance of psychiatric research, and the importance of team work in clinical psychiatry. The President maintains that a sound psychiatry must build upon a knowledge of normal psychology and of the experimental methods in use in the latter field. It should further be based upon a general biological method of approach to psychological problems, whether normal or abnormal. Many illustrations taken from recent contributions to psychological literature are given in order to make clear what the author understands by a biological method of approach. The argument next returns to the necessity for team work in psychiatric medicine, and its basis, its aim and some of its practical characteristics are discussed. A scheme is presented according to which the author considers that the "team" should be constructed, and the general type of examination which such a team would carry out is sketched. Two final sections deal with the place of psychiatry in general medicine, and with the relations of psychiatry and neurology.—*F. C. Bartlett* (Cambridge).

149. **Lord, J. R. Mental hospitals and the public: the need for closer co-operation.** London: Adlard, 1927. Pp. 33. 1/6.—The public attitude towards mental disorders and their treatment is regressive and still tainted with medievalism. A study of the history of the development of general and mental hospitals in Europe and of the public attitude towards them shows in what sense this is true. So far as general hospitals were concerned a change in regard to them followed the pioneer work of John Howard and Lord Shaftesbury, but the division between the general and the mental hospital was disastrous for the latter. Future prospects are discussed, and Lord urges the necessity of bringing the general and mental hospital more closely together, of relating practical psychiatry and general medicine more intimately, of admitting voluntary patients to all mental institutions, and of disseminating knowledge concerning mental disease and the work of mental hospitals more widely. The present attitude of the press towards mental disorder is strongly criticized, the isolation of mental hospitals deprecated and the official recognition of independent, unofficial and voluntary mental hospital visitors advocated. The author urges in conclusion that a dynamic approach to psychiatry is the only possible one, and further that a thorough environmental investigation in regard to mental disorders is called for.—*F. C. Bartlett* (Cambridge).

150. **Lukina, A. M., & Shnirman, A. L. [An experiment in the formation of the associative-motor reflex in oligophrenics; the pathoreflexology of oligophrenia.]** *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, **2**, 346–368.—In the training of the associative-motor reflex in oligophrenics the association reflex is attained rather quickly. But the achieved reflex remains generalized for a considerable period, and reaches a satisfactory durability only with difficulty; color discrimination is only suggested; place discrimination is somewhat better, but it also exhibits in-

adequate permanence. Disturbances in discrimination, sometimes in the direction of generalized excitation, sometimes in that of complete inhibition, show an undulatory character. Motor effects, as well as associative and simple reflexes, show in oligophrenics a series of characteristics: sometimes a marked delay of the reflex, a frequent withdrawal of the hand, often with a gradual increase of energy, continued drawing away, step-like movements, etc.; additional reflexes (e.g., automatic withdrawal of the hand without any sort of external stimulus) are very frequent in oligophrenics. The rise and fall of motor excitation has a wave-like character. Thus it appears that the activity of the central nervous system of oligophrenics is manifested in a special type of changing rhythm in the excitation and inhibition processes. The clinical investigation of oligophrenics leads to the hypothesis of a correlation between this rhythm and disturbances of the vegetative nervous system and the endocrine glands.—*A. L. Shnirman* (Leningrad).

151. **Magitot, A., & Hartmann, E. La cécité corticale.** (Cortical blindness.) *Bull. de la Soc. d'ophth.*, 1927, No. 8, 427–546.—(A report presented to the Society of Ophthalmology of Paris.) The report begins with a study of the visual cortex and the definition and the limits of cortical blindness. Then follow 200 observations grouped according to clinical types. The authors set forth the three essential symptoms of the clinical type where the patient complains of not seeing, without anyone's being able to detect any clear objective sign: blindness, integrity of the fundus of the eye, and conservation of the optic motor reflexes. In order to explain the occasional ignorance of the blindness, the authors point out that in hemianopsia and scotomata of central origin there is likewise an ignorance of the visual gap. It seems, therefore, that this may be the rule. They say that a destructive lesion of central origin may be unconscious and that it may involve a loss of the notion of that part of the visual field. Generalizing, one may therefore explain what the authors call "anosognosia." This is moreover supported by hallucinations and *fabulation évocâtrice*. The authors likewise point out, without pressing the point, the persistence of visual memories, which is the rule in cortical blindness. They add minor and associated symptoms, and conclude by describing the diagnostic technique and the three principal causes of errors: psychic blindness, hysterical blindness and feigned blindness. A bibliography of 220 numbers ends the report.—*Math. H. Piéron* (Sorbonne).

152. **Modena, G. Osservazioni sulla istopatologia dei cilindrassi nelle lesioni da encefalite infettiva.** (Observations on the histopathology of the axis-cylinders in lesions due to infectious encephalitis.) *Riv. sper. fren.*, 1927, 50, fasc. 3–4.—Studying the nervous system of subjects who died from epidemic encephalitis in an acute stage, the author noted by the method of Donaggio special rounded formations along the axis-cylinders. These formations are bound up with perivascular infiltrations and represent attempts at regeneration or processes of conglutination of the fibrils. The formations described by Modena are preferably localized in the locus niger and in the locus coeruleus, and are absent in the cerebellum and in the cortex.—*G. C. Ferrari* (Bologna).

153. **Morgenstern, —. Un cas de mutisme chez un enfant myopathique, ancien convulsif. Guérison du mutisme par psycho-analyse.** (A case of mutism in a myopathic child, a former convulsive. Cure of the mutism through psychoanalysis.) *Encéph.*, 1927, **22**, 478–481.—This paper describes a delicate case of mutism of a psychogenetic appearance which was developed in a terrain seriously injured from a neurological point of view. The interesting thing was that the child, who was not able to talk, expressed himself by drawings, certain ones of which showed in unquestionable fashion that there were, in this child of 9½, very distinct sexual preoccupations, notably the idea of castration. Psychoanalysis was the psychotherapeutic proceeding employed, and it cured the child of mutism. As soon as the child was able to talk, he confirmed the interpretation of the drawings given by the doctor.—*Math. H. Piéron* (Sorbonne).

154. **Rosenow, E. C. Thrombosis of the cerebellar and vertebral arteries associated with intermittent hiccup.** *Arch. Neur. & Psychiat.*, 1927, **18**, 348–356.—A report of the clinical, pathologic, and experimental observations in the case of a patient who died of thrombosis of the posterior inferior cerebellar and vertebral arteries at a time when cases of hiccup were occurring in the vicinity; in this case intermittent hiccup was a prominent symptom. Cultures and inoculations into rabbits were made from the nasopharynx and the urine during life and from emulsions of the brain and from the blood aspirated from the heart and brachial vein after death. The streptococcus isolated from the nasopharynx, the urine and the blood resembled in every respect that which the author isolated in cases of epidemic hiccup. The lesions in the animals, while more widely distributed and more severe, were similar in type, including thrombosis, and in location to those found in the patient. The causal relationship of the streptococcus to the lesions in the patient and in the animals is apparent through its demonstration in, or immediately adjacent to, the lesions, in thrombi and by negative cultures of the brain remote from the lesions in the medulla of the patient, and through the demonstration of its absence in normal tissues free from thrombosis. Streptococci having the power to incite spasms of the diaphragm practically never occur in the throats of persons except during attacks of epidemic hiccup, and have been proved absent from the throats in a number of cases of persistent hiccup due to other causes. In consideration of all the facts, the author believes that this patient's attack of thrombosis and death subsequent thereto, and of intermittent hiccup was due to localization in the medulla of the streptococcus of epidemic singultus. Even if it is granted that absolute proof of the exact relation of the streptococcus to the thrombosis is lacking, the observations at least emphasize the importance of searching for bacteria in the lesions in similar cases, especially if associated with hiccup.—*L. M. Hatfield* (Boston Psychopathic Hospital).

155. **Shrubsall, F. C. The sequelae of encephalitis lethargica.** *Brit. J. Med. Psychol.*, 1927, **7**, 201–220.—Epidemic encephalitis lethargica first occurred toward the end of the war. Characteristic symptoms are given. It was called at first "sleepy sickness," which was confused with negro lethargy or "sleeping sickness," an entirely different disease. It was made notifiable in England in 1919; and since that time in London effort has been made to follow up all cases. 1325 true cases were thus reported during seven years ending December, 1925. In 1925, a follow-up revealed a death rate of 37%, serious incapacity 22%, apparently complete recovery 28%—remainder not located. The mortality is greatest at the two extremes of age; incidence in the young is greater for males, mortality higher for females. It is a disease of adult life rather than infancy. All social classes are affected—there is no relation to poverty, density of population, prevalent occupation, dampness, altitude, etc., and no special racial incidence. Acute phases occur in the colder months—incidence of sequelae shows no relation to seasonal conditions. Physical changes are more prominent in older, mental in younger patients. There is a listing and discussion of the physical changes and physical sequelae, the mental changes and conduct changes. Illustrative cases are cited.—*N. Fenton* (Ohio).

156. **Smith, M., Culpin, M., & Farmer, E. A study of telegraphist's cramp.** Indus. Fatigue Res. Board Rep., No. 43. London: H. M. Stationery Office, 1927. Pp. 40. 1/6.—A preliminary study of a "cramp" group of telegraphists showed that no certain discrimination from normal people was possible on the basis of muscular weakness. The work done makes special demands on emotional reactions, and in the second place therefore an attempt was made to find to what extent the "cramp" group displayed neurotic symptoms. It was then found that a large majority of individuals in this group displayed such symptoms. Next an attempt, apparently successful, was made to differentiate young

learners (16 years of age) on the ground (a) of psychoneurotic symptoms, and (b) of muscular ability so as to discover those among them who approximated to a "cramp" type. Studies of other clerical groups are included. Full details are given of the tests used, several of which appear to have a definite vocational significance.—*F. C. Bartlett* (Cambridge).

157. **Snowden, E. The psychological treatment of mania and depression.** *Lancet*, 1927, **212**, 1016–1020.—The author believes that the conditions of mania and depression are closely allied. "The chief difference between them seems to be that the depression state is the result of failure to secure any outlet for the physical activity which results from an emotional response, while the state of restlessness is an expression of that activity, not necessarily directed towards the object for which it was aroused, but possibly spread over all the events of the patient's life. The cause of the condition is the same in both cases, being the control that is exercised by civilization in preventing the expression of natural desires." The parathyroid plays a very important part in the condition of mania. This gland is "said to be stimulated by the products of muscular activity circulating in the blood stream. The parathyroid secretion produces an over-excitability in the brain cells, leading to a greater activity or preparedness for activity in the motor cortex. This in turn produces a condition for which muscular activity is the only relief, and leads to the development of a vicious circle." The treatment is to enforce rest so that this circle may be broken. Sedative drugs may be used. The whole circumstances of the case must be searched out and explained to the patient. Two illustrative cases are described. Depression is the result of a complete inability to secure expression of some more or less chronic emotional upset. This causes an interference with the general metabolism of the body, an increased infection in the intestine, and the production of toxic substances in the blood stream. This condition must be met by medicinal and hygienic means. It is necessary also: "to arouse whatever is left of the patient's reasoning capacity. It gives the patient something to hold on by. Every effort should be made to produce in the patient a feeling of security." The condition causing the emotional upset should then be discovered and explained to the patient. One illustrative case is cited and described.—*W. T. Heron* (Minnesota).

158. **Targowla, R., Lamache, A., & Daussy, H. Débilité mentale, troubles du caractère et débilité motrice chez deux soeurs jumelles. Atteinte disséminée fruste du névraxe.** (Mental debility, disorders of character and motor debility in twin sisters. Diffused abortive involvement of the central nervous system.) *Encéph.*, 1927, **22**, 487–492.—These two sisters were born prematurely, both of them had convulsions at three years of age, and both at 40 were affected by psychic debility and by disorders of character and behavior. This psychopathic syndrome has lasted since the age of three years, but it suffered around the twentieth year an aggravation which necessitated the interning of one of them. The present problem is a question of a solitary neuro-psychic affection depending upon a single cause which appears probably due to a intrauterine affection of the central nervous system brought about at the end of gestation.—*Math. H. Piéron* (Sorbonne).

159. **Thacker, W. S. Cerebellar abscess in an elderly woman.** *Lancet*, 1927, **212**, 490–491.—A brief description of a case of cerebellar abscess the symptoms of which first led the doctors to treat it as an abdominal case. The symptoms two days before death were: inclination to lie on left side; "pain about her right ear and dizziness and vomiting if she moved, the vomiting being the most prominent symptom. The tympanic membrane showed a light reflex bright but shortened, and in the posterior superior quadrant a salmon-pink patch, like the center patch seen in otosclerosis. The tuning fork tests showed middle-ear involvement. Nystagmus of the third degree to the good ear was present."—*W. T. Heron* (Minnesota).

160. **Torregrossa, —. Folie à deux et délires communiqués.** (Folie à deux and communicated deliria.) Paris: Les éditions médicales, 1927. (Thèse de médecine.) Pp. 100.—"Communicated deliria" have up to this time been confused with *folie à deux*. The latter term appears too extensive, for it includes cases in which insanity is clearly communicated as well as the cases in which the deliria start simultaneuosly. True *folie à deux* is characterized by a particular delusion occurring in two individuals by virtue of a morbid predisposition, of the intimate and continued contact in which they live, and of occasional influences which operate on them at the time and play the rôle of determining causes. In order that there be communicated delirium it is necessary that the insane person and his associate live a common, intimate life, that this insane person enjoy a manifest moral and intellectual superiority over his "co-delirant," that the delirium keep close to the truth, that it take on a character of probability, and that, on the other hand, the content of the delusion flatter the feelings of the associate. In the case of communicated deliria, it is sufficient for recovery that the co-delirious and the delirious individuals be separated. A small bibliography terminates the book.—*Math. H. Piéron* (Sorbonne).

161. **Valence, Y. C. R. Contribution à l'étude des états interprétatifs (en dehors du délire d'interprétation.)** (Contribution to the study of interpretative states, excluding the delusion of interpretation.) Paris: Arnette, 1927. (Thèse de médecine.) Pp. 222.—Side by side with the chronic systematized delusion of interpretation, non-demential in evolution, there exists a complete series of interpretative states which are distributed throughout the field of psychiatry. These states can be divided into 3 groups: (1) Episodical interpretative states in which the interpretation is transitory and not modified by the character of the psychosis in the course of which it appears. The author studies them in organic diseases, in psychoses (intellectual obnubilation, emotional states, intellectual enfeeblements, and chronic systematic delusions) and in passional states (states of emotion and passion, passional delusions). (2) Symptomatic interpretative states which bring about a syndrome so well formed that it can mask the subjacent pathological emotional or intellectual state. These states are encountered in toxic and infectious delusions, as epilepsy, sub-acute alcoholism, debility, cerebral senility, melancholy, mania, and periodic insanity. (3) The characterized interpretative psychoses which usually break out after an intense emotional shock and which develop in a hyper-emotive constitution. 70 observations are given to support this classification. From the psychological point of view delusional interpretation has the same characteristics in interpretative psychoses and in delusions of interpretation. A bibliography completes the work. —*Math. H. Piéron* (Sorbonne).

162. **Verdot, P. Le mal de mer mental.** (Mental sea-sickness.) Paris: Legrand, 1927. (Thèse de médecine.) Pp. 75.—Mental sea-sickness shows the same symptoms as real sea-sickness, but with anuria and diplopia added. It is met with in neuropathic individuals, and appears in the absence of conditions necessary for producing somatic sea-sickness. It is produced in entirety by the psychism of the individual. There is a short bibliography.—*Math. H. Piéron* (Sorbonne).

163. **Wertheimer, F. I. Les facteurs constitutionnels. Leur valeur révélatrice dans les troubles du comportement.** (The constitutional factors. Their significance in behavior disorders.) *Encéph.*, 1927, **22**, 457–463.—Research on constitutional aspects in pathology means research on the factors which depend with certitude upon heredity rather than upon environment. There are only a few characters whose correlative significance can clearly be established, and it is only in a few typical cases that these facts can be utilized in psychiatry. The pyknic body type (Kretschmer), the hypersthenic type of Mills, has a biological affinity with manic-depressive psychoses. The asthenic type (Mills and Kretsch-

mer) is shown oftenest in schizophrenia in the same manner as the dysplastic types. From the psychological viewpoint, the personality of individuals who will suffer later from a manic-depressive psychosis belongs to the category of those who easily join others and search for pragmatic affective contact with other individuals of their environment (syntropics), while the personality of individuals who will suffer later from schizophrenia belongs often to the category of those who shut themselves away from others and who are affectively solitary persons (idiotropics).—*Math. H. Piéron* (Sorbonne).

[See also abstracts 77, 83, 115, 118, 124, 195, 220.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

164. **Ament, W. S. Religion, education and distinction.** *School & Soc.*, 1927, **26**, 399–406.—Statistical summaries are presented concerning the religious or denominational affiliations (1) of a random sample (to the extent of 2000) of the individuals listed in Who's Who; (2) of the presidents of the United States; (3) of the colleges recognized by the American Association of Universities; and (4) of the colleges having chapters of Phi Beta Kappa. These are paralleled by data on the membership of the various religious denominations or sects in an effort to discover whether the denominations claim in a degree proportional to the size of their memberships the distinctions just enumerated. The outstanding finding of the study is that the Unitarians, Episcopalians, Congregationalists, Friends, and Presbyterians have received many more recognitions of the types under considerations than have the Baptists, Methodists, or Catholics. Lack of any denominational affiliation is conspicuous among the individuals sufficiently celebrated to be mentioned in Who's Who; and a marked difference in presence or type of sectarian attachment is also apparent in the various professional groups represented in the sample.—*H. L. Koch* (Texas).

165. **Bain, R. Religious attitudes of college students.** *Amer. J. Sociol.*, 1927, **32**, 762–770.—"This study shows a marked diminution of belief in God and immortality as compared with Leuba's findings of ten years ago. The men are apparently more liberal than the women, but to a less degree than Leuba found. The women are apparently more consistent in their beliefs than the men. Leuba's conclusion that upperclassmen are more liberal than underclassmen is confirmed."—*E. A. Esper* (Washington).

166. **Breitkopf, E. Beiträge zur Ethnographie der Kpando-Leute (Togo).** (Contributions to the ethnography of the Kpando people (Togo).) *Anthropos*, 1927, **22**, 477–506.—On the tribal ceremonies, etc., of a West African folk.—*D. McL. Purdy* (California).

167. **Bridges, J. W. A study of a group of delinquent girls.** *Ped. Sem.*, 1927, **34**, 187–204.—33 girls in an industrial school, committed mainly for sex delinquency, were surveyed for different factors bearing upon their delinquency. Practically all came from very unfavorable home environments. As a group they stood low on intelligence tests. They showed more than normal symptoms of psychopathic and emotionally unstable conditions, as revealed by Mathews and Woodworth questionnaires, although in temperamental traits they were rated as fairly normal by the superintendent. The home environment is pointed out as probably the most fundamental factor leading to their delinquency.—*J. F. Dashiell* (North Carolina).

168. **Canesi, A. Ricerche preliminari sulla psicologia della preghiera.** (Preliminary investigations into the psychology of prayer.) *Pubbl. Univ. Cattol. Milano*, 1925, Serie I, **1**, fasc. iv: 247–315.—In studying the psychological basis of prayer, the author employed as subjects only educated ardent Catholics. They were given unusual mystic or ascetic prayers, into the moods of which they

were to fit themselves in order to make the prayers their own, and were then expected to relate their feelings and states of mind during the process. The author found that the main sentiment of Catholic prayer is faith aroused by an intellectual element or reasoning; imagery, feeling, and will being subordinate to intellectual motives.—*R. Schwarz* (George Washington University).

169. **Case, C. M. Culture as a distinctive human trait.** *Amer. J. Sociol.*, 1927, **32**, 906–920.—Tyler's definition of culture has emphasized too strongly the contrast between social and organic inheritance. Culture consists essentially in the "external storage, interchange, and transmission of an accumulating fund of personal and social experience by means of tools and symbols." Our attitudes toward the gap thus left between the human and subhuman levels will be determined by the philosophy of nature we adopt; e.g., the Darwinian theory of continuous unilinear development as against the unreduced diversity of the theory of emergent evolution.—*E. A. Esper* (Washington).

170. **Challay, F. Le coeur japonais.** (The Japanese soul.) Paris: Payot, 1927. Pp. 16. 15 fr.—As the yellow peoples have derived from the whites modern science and doctrine, the white peoples can, according to the author, derive from the yellow some of their traditional sentiments. He tries to explain in its original nuances the affective life of Nippon: courage and the sentiment of honor, politeness, the love of love, the respect for the family and filial piety, patriotism, the taste for beauty, the joy which knowledge brings. The Japanese soul has been formed under the influence of three noble and profound religions, the one, Shintoism, autochthonic, the two others, Confucianism and Buddhism, brought in from the outside. Shintoism and Buddhism are found in the love of nature; Shintoism has shown the Japanese the infinite value of their islands; Buddhism, philosophy of impermanence, has led them to appreciate the ephemeral and elusive parts of a landscape. No bibliography.—*Math. H. Piéron* (Sorbonne).

171. **Cobb, J. C. Quantitative restating of sociological and economic problems.** *Amer. J. Sociol.*, 1927, **32**, 921–930.—It has not been demonstrated that there is any sociological or economic problem which cannot be solved by quantitative methods. When problems which have been alleged to be incapable of such solution are adequately analyzed, they resolve themselves into a number of discrete problems each of which can be treated by the quantitative method.—*E. A. Esper* (Washington).

172. **d'Agostino, V. Scienza e arte nell'antropologia di Seneca con particolar riguardo alla sua psicologia.** (Science and art in Seneca's anthropology with special reference to his psychology.) *Arch. ital. psicol.*, 1927, **5**, 212–241. —*H. Klüver* (Columbia).

173. **Davis, J. Testing the social attitudes of children in the government schools in Russia.** *Amer. J. Sociol.*, 1927, **32**, 947–952.—Whereas American children rank the banker first and the ditch-digger last, a group of Russian children ranked the peasant first and the banker and priest last. In both groups the doctor and civil engineer were ranked high and the barber and waiter low.—*E. A. Esper* (Washington).

174. **Ellis, H. The task of social hygiene.** (2d ed.) Boston: Houghton Mifflin, 1927. Pp. xix + 414. $2.25.—A record and program of social reformation. Same in content as 1912 edition except for a new preface. The author points out that we are now in the midst of the task set forth in his first edition.—*M. Goodrie* (Clark).

175. **Goode, J. P. Geography and world citizenship.** *School & Soc.*, 1927, 26, 377–381.—A plea is made for international-mindedness. The study of geography is suggested as a technique for developing this quality.—*H. L. Koch* (Texas).

176. **Haldi, J. A. A study of the empirical and the metaphysical personal-**

ity. *New Scholas.*, 1927, **1**, 65–77.—An objective study of the empirical personality shows the need of something more than a mechanistic interpretation. Tropisms and reflex action do not fully account for the behavior of the lower animals. In man reflex action is still less adequate, while the limitations of cerebral localization show that definite psychic functions cannot be assigned to circumscribed areas. The effects of the glands of internal secretion upon the personality do not explain it as the result of chemical reactions. The organization of our experiences in relation to one another, together with their maintenance, indicate a directive energy, the *psyche*. This is present in the lower animals, but only man has it in that degree which functions in social relations. This principle is supra-sensory in character and cannot be explained as existing in the form of modifications in the nervous system.—*J. P. Hylan* (Stoneham, Mass.).

177. **Hambly, W. D. The history of tattooing and its significance.** New York: Macmillan, 1927. Pp. 346. $7.00.—*R. R. Willoughby* (Clark).

178. **Hambly, W. D. Tribal dancing.** New York: Macmillan, 1927. Pp. 296. $6.00.—*R. R. Willoughby* (Clark).

179. **Hirsch, N. D. M. A study of natio-racial mental differences.** *Genetic Psychol. Monographs*, 1926, **1**, 233–406.—About 5000 American born school children of foreign parentage were tested with either the Pintner-Cunningham Primary Mental Test, Dearborn Test A, or Dearborn Test C. The results showed different I.Q. averages for the different national groups in descending order as follows: Polish Jews, Swedes, English, Russian Jews, Germans, Americans, Lithuanians, Irish, British Canadians, Russians, Poles, Greeks, Italians, French Canadians, Negroes, and Portuguese. "The important mental differences that were discovered to exist among these national groups were not only differences in the average mentality of the groups, but more striking, there were enormous differences in the proportion of 'very superior intelligence' and 'border line deficiency' subjects within each national group. . . . The intelligence of the national groups showed that there is no connection between high intelligence and the possession of so-called Nordic blood. . . . Differences in intelligence therefore are national or natio-racial, not racial." The author also finds a relationship between intelligence and occupational status. Anthropometric measurements confirm the results of intelligence tests concerning inherent natio-racial differences. A brief summary of preceding studies of racial intelligence with a criticism of Brigham's *A Study of American Intelligence* is included. There is also a criticism of the racial theory, with a statement of the natio-racial hypothesis proposed by the writer. This is followed by a statement of the general principles underlying the formation of natio-races, with a discussion of the United States as a natio-race, advocating the formation of a separate negro state as a solution of our negro problem, birth-control to prevent breeding of border-line deficients, large families for the superior, and the eugenic crossing and blending of certain of the natio-racial groups within the country. No bibliography.—*M. Meenes* (Lehigh).

180. **House, F. N. The limitations of economic analysis.** *Amer. J. Sociol.*, 1927, **32**, 931–936.—"Analysis is an important part of the method of social science, but in its use there is danger of losing sight of actual forces and processes."—*E. A. Esper* (Washington).

181. **Levy-Bruhl, L. L'âme primitive.** (The primitive mind.) Paris: Alcan, 1927. (Bibliothèque de philosophie contemporaine.) Pp. 451. 50 fr.—The author proposes to investigate how so-called "primitives" regard their own individuality, as well as the connotations of the word "mind" which, in primitive societies, correspond more or less to those suggested to us. The primitive mind both thinks and feels creatures and things as homogeneous, i.e., sharing in the same ensemble of qualities or the same substance. In addition, the primitive

must make provision against the dangers by which he feels himself continually threatened; and this fear determines his attitude in regard to creatures and things. If the primitive lends to objects, to stones and to trees a consciousness and a will capable of according or refusing that which is demanded of them, it is not that he superadds this consciousness or will, according to our conception of these things; it is not that he personifies inanimate objects; it is that he feels in them a force which he can not distinguish from them. The primitive can not easily distinguish the individual from the species. If the individual dies, it is an accident; he does not vanish from view, for he lives in the race. There is an extremely close solidarity between members of the same species; they are only the multiple and transitory expressions of a unique and imperishable essence. The individual hardly knows himself except as a member of his group. There is intimate and even organic solidarity between members of a social group, the individual who does not belong to a certain group not being considered by it. The family in primitive societies is of the "classificatory" type; the social unit is not the individual but the group; the individual takes to himself the relations of the group. All the members of the same generation, within a group, are fathers and mothers of those who make up the following generation. Since individuals are simply parts of the group, the group or its chief decides for them the most important acts of their lives. There is collective group responsibility, and all can be punished for the fault of one. The ground is the property of the group, and if a member of one group is called upon to serve a stranger, he gives to his group the remuneration for his work, since he has not been able to give to it his energy, labor, and cooperation during this time. In regard to the relations between the living and the dead, they are close and complex. The dead are constantly present to the spirit of the living and are always consulted—they live with the members of their group who appear on the earth. While living in their subterranean or celestial abode, they are at the same time present in children whose names and souls they are. At the time of initiation this presence ceases in order to make room in the individual just arrived at adulthood for a more complete knowledge of his ancestors. At this time the primitive has the right and duty of assuring the permanence of the group by giving it a posterity. The individual is himself only by favor of the ancestors who live again in his body; but with the primitive there is never any idea which corresponds to that which we have of the soul. There is an index at the end of the work. There is no bibliography at the end, but there are many bibliographical references in the footnotes.—*Math. H. Piéron* (Sorbonne).

182. **Lundberg, G. A. The demographic and economic basis of political radicalism and conservatism.** *Amer. J. Sociol.*, 1927, **32**, 719–732.—A comparison of the five politically most radical and the five politically most conservative counties in North Dakota and in Minnesota with respect to physical, social, and economic environmental factors tends to show that the radical counties are characterized by soil and rainfall less favorable to agriculture, newer and less settled communities, a larger percentage of foreign immigrants and of rural population, and inferior economic circumstances and prosperity.—*E. A. Esper* (Washington).

183. **Mahoney, C. K. The religious mind: a psychological study of religious experience.** New York: Macmillan, 1927. Pp. xxii + 214. $2.00.—"The religious mind" is a comprehensive re-shaping, in terms of religious experience, of the prevailing conceptions in psychology. There is a strongly evidenced inclination to favor the philosophical rather than the scientific viewpoint in psychology, and there is a rather heavy leaning upon James and McDougall. In his criticism of the behaviorists, Mahoney expresses regret that they have "passed up" philosophy. "As for religion," he says, "it becomes reduced to behavior without any meaning whatever, since the realm of the spiritual is

internal and beyond apprehension through the five senses.'' The conception of stimulus and response has value inasmuch as it prevents the abstraction of man from his environment. But ''Religion is not a self-generated type of experience. Its activities are responses. And it may be assumed that they are responses to the stimulus of 'a power not ourselves that makes for righteousness.' The religious life is a life of response. The assumption that they are responses to a divine initiative is not illogical. The assumption has as much scientific ground to stand on as any other. . . .'' From this point of view, the writer has discussed such topics as variation and types in religion, religious motivation, conversion, religious education, religious growth; and religious aspiration, belief, and thought.—*N. L. Munn* (Clark).

184. **Palmer, V. M. Impressions of sociology in Great Britain.** *Amer. J. Sociol.*, 1927, **32**, 756–761.—British sociologists have developed a sociology characterized by an emphasis upon social evaluation, practical application, and the synthesis of knowledge from the various fields of social science.—*E. A. Esper* (Washington).

185. **Park, R. E. Human nature and collective behavior.** *Amer. J. Sociol.*, 1927, **32**, 733–741.—''In the evolution of the organism the act is primary, structure secondary. The same logic may be applied to the description of society and of social institutions. Collective action is first. Action patterns once established become social structure.''—*E. A. Esper* (Washington).

186. **Pédron, M. L'enfant *gbaya* (Afrique française centrale).** (The Gbaya child (French Central Africa).) *Anthropos*, 1927, **22**, 351–356.—On tribal customs relating to children.—*D. McL. Purdy* (California).

187. **Radin, P. Primitive man as philosopher.** New York: Appleton, 1927. Pp. xviii + 402. $3.00.—(Foreword by John Dewey.) An attempt to controvert the assumption that among primitive peoples there is no intellectual class. The author has made use only of data which was obtained at first hand, and this has been published in the original with an authentic translation. Much of this material is quoted from native sources, and includes poems, aphorisms, proverbs, myths, and discourses. In the first part of the book the author describes the exceptional primitive man, the thinker, in relation to society. He is pictured as possessed of a remarkable ability to face reality and to subordinate magical ritual to practical action. His thinking is largely characterized by ''non-intellectual analysis'' which is on a par with ''rational analysis.'' Along with opportunity for freedom of self-expression is found an emphasis upon personal responsibility for actions which involve other individuals. The second part of the book has to do with the higher aspects of primitive thought with concepts of the world, with ideas of the self and of the godhead, etc. The main conclusion is that among primitive societies there is a definite class of thinkers which corresponds in numbers and quality to the intellectual class in civilized groups and which has ideas about most of the problems which have confronted civilized philosophers.—*M. Goodrie* (Clark).

188. **Reuter, E. B. The relation of biology and sociology.** *Amer. J. Sociol.*, 1927, **32**, 705–718.—''Sociology as a science is a study of the natural process by which personality is formed and cultural continuity maintained. Biology is a study of the organic process by which individuals are produced and species continuity maintained.'' ''Sociology accepts the individual as a datum; biology is not interested in, and cannot talk sense about, anything except the individual.''—*E. A. Esper* (Washington).

189. **Sandschejew, G. Weltanschauung und Schamanismus der Alaren-Burjaten.** (The shamanism of the Alar-Buryats and their conception of the world.) *Anthropos*, 1927, **22**, 576–613.—The animistic beliefs of a Mongolian people of Eastern Siberia. They believe that man has three souls. The first is localized in the skeleton and remains there after death. The second is detachable

from the body and can assume various forms. When one dreams it departs through the nose in the form of a bee or a wasp. This soul can perform, independently of the body, acts of which its possessor may be unconscious. It is mortal, and is eaten by ghosts after the death of its owner. The third soul persists after death, generally in the shape of a small replica of the body. To the action of these souls of the dead are ascribed all events which the Buryats cannot otherwise understand.—*D. McL. Purdy* (California).

190. **Sapir, E. Speech as a personality trait.** *Amer. J. Sociol.*, 1927, **32**, 892–905.—In analyzing speech as a personality trait, individual peculiarities must be measured as deviations from a social norm. Speech may be analyzed into five independently variable factors: voice, speech dynamics, pronunciation, vocabulary, and style of connected utterance.—*E. A. Esper* (Washington).

191. **Saudek, R. The methods of graphology.** *Brit. J. Med. Psychol.*, 1927, 7, 221–259.—A discussion of psychological interpretations of handwriting. Contains an historical introduction, general discussion of methods used, and concludes with some consideration of the use of graphology in the diagnosis and description of psychopathic states and organic disease.—*N. Fenton* (Ohio).

192. **Schumacher, P. Expedition des P. P. Schumacher zu den zentralafrikanischen *Kivu*-Pygmäen.** (Expedition of Father P. Schumacher to the Central African Kivu pygmies.) *Anthropos*, 1927, **22**, 530–549.—Data on pygmy ethnography.—*D. McL. Purdy* (California).

193. **Smith, W. C. The rural mind: a study in occupational attitude.** *Amer. J. Sociol.*, 1927, **32**, 771–786.—"There is a difference between the characteristic socio-psychic traits of rural and urban dwellers. The causes of these differences may be considered from four points of view: (1) selection, (2) isolation, (3) domestication, and (4) occupation. The occupational activities are fundamental in the development of attitudes, and, since rural occupational conditions are so far different from those of the city, the differences between the two groups may be largely accounted for in this way."—*E. A. Esper* (Washington).

194. **Steiner, J. F., & Brown, R. M. The North Carolina chain gang.** Chapel Hill, N. C.: Univ. N. C. Press, 1927. Pp. x + 194. $2.00.—This is the first of a contemplated series of studies concerning North Carolina crime problems. The study concludes that the county chain gang system as administered in North Carolina is a failure as a penal institution, is of doubtful economic value to the counties, and is of little value in reclaiming the criminal. Larger camp units under state control are recommended as means of remedying many of the defects of the county unit system now in vogue. The authors present tables showing the results of their study of crimes and criminals in the state. Three typical case histories supplement the study.—*J. A. Highsmith* (N. C. College for Women).

195. **Stevens, H. W. The mental hygiene of the working girl.** *Survey*, 1927, **58**, 554–555.—The working girl in the main is her own mental hygiene. Her essential woman instincts are the safeguard of the integrity of the woman mind in industry. Physicians and social adjusters merely add a few clumsy repairs or remove a few trivial blemishes.—*G. J. Rich* (Institute for Juvenile Research).

196. **Stockwell, A. W. Our oldest national problem.** *Amer. J. Sociol.*, 1927, **32**, 742–755.—The Immigration Act of 1924 represents a revolutionary change in our immigration policy, introducing the principle of restriction. While some defects require remedy, the new legislative machinery represents a tremendous advance toward the solution of the immigration problem.—*E. A. Esper* (Washington).

197. **Taylor, G. Environment and race.** London: Oxford, 1927. Pp. xiv + 354. 21/.—The principal thesis of the book is that biological distribution is most logically explained by the progressive crowding out of early forms by

those later evolved, which are presumably more vigorous and better adapted; and as a corollary, that the center of evolution of man is in the vicinity of Turkestan, the most primitive peoples being therefore in the periphery (the tips of the three "peninsulas" of Europe, Africa and America) and in secluded byways along the migration corridors (e. g., in the Andamans). Close contact is maintained at every step of the argument with the underlying geographic controls, and additional evidence is adduced from animal distributions, such as that of the anthropoids. Part III considers the conditions and adjustment facing and adopted by the white race in the Australian environment (with which the writer is most familiar), with special reference to the arid interior; and Part IV offers an approximate solution of the problem of the maximum habitability of the earth, by the writer's "econograph" method. Other original devices presented as needed are the "ethnograph," a mode of portraying group or individual characteristics in terms of selected race criteria (prominent among which is the cephalic index); and the method of "homoclimes," for predicting the economic and habitability potentialities of relatively new regions.—*R. R. Willoughby* (Clark).

198. **Thomas, W. I., & Znaniecki, F. The Polish peasant in Europe and America.** (2d ed.) 2 vols. New York: Knopf, 1927. Pp. xv + 1115; vi + 1116–2250. $10.00.—Reprint of the 1918 edition, with minor changes in makeup. It will be recalled that the work is monographic in scope, being designed to exemplify the authors' conception of method in social research, as set forth in an 86-page introductory note.—*R. R. Willoughby* (Clark).

199. **White, R. C. The human pairing season in America.** *Amer. J. Sociol.*, 1927, **32**, 800–805.—"A study of four and a half million women of child-bearing age shows that the highest rate of conception may be in different cities in any month during the year, though February is generally the lowest month. Temperature seems to have some connection with the conception rate. But the general conclusion to be drawn is that, if a natural pairing season ever existed for man, modern culture has largely freed man from the exigencies of sexual periodicity in so far as it is reflected in conceptions which result in births."—*E. A. Esper* (Washington).

200. **Willey, M. M., & Herskovits, M. J. Psychology and culture.** *Psychol. Bull.*, 1927, **24**, 253–283.—A review of literature (148 titles). (1) Anthropologists have called into serious question those interpretations of psychological testing that make much of racial differences; and in general they have tended to emphasize the cultural factors as against the biological in the analysis of human behavior. (2) Wissler has gone farthest in analyzing the morphology of culture into its component "traits;" and many investigators have made analyses of certain cultures in the Americas and elsewhere along this line; but along with this "pattern" description there has been a "functional" emphasis upon the interrelation between culture traits and between traits and individuals. (3) In studies of the dynamics of culture points of sharp disagreement have emerged. "To be sure, culture grows only through man, but in culture itself, and not in man, is the causative factor that conditions the rate of growth:" such a statement has both its defenders and its opponents. A wider divergence is found between most American anthropologists, on the one hand, who treat the cultures of different sections "inductively," and are content to note their particular diffusions from many focal points, as affected by distances, ecological conditions, etc., and the German and English anthropologists, on the other, who adhere to the doctrine of diffusion of all cultures from a single origin, as the Egyptian. (4) The evolutionist mode of interpreting cultural change has given place to theories emphasizing the geographical, the individual psychological, and the racial contributions. —*J. F. Dashiell* (North Carolina).

201. **Wissler, C. The culture-area concept in social anthropology.** *Amer. J. Sociol.*, 1927, **32**, 881–891.—The culture-area concept is a "formulation expressing the regional character of human social behavior." "We need a genetic explanation in terms of function before the internal character of such an area will stand revealed. Generalization will not do, but research must begin with specific regions, and then must necessarily deal with particular phases of culture. And in this is the promise of an approach by empirical method to two important problems, so far treated speculatively: the place of environmental factors in social evolution, and the relation of the economic to the immaterial factors in culture; and, finally, the functional significance of tribal borrowing in the evolution of nationalism."—*E. A. Esper* (Washington).

202. **Woolston, H. Changing mortality.** *Amer. J. Sociol.*, 1927, **32**, 937–946.—"United States mortality rates, 1910–20, show uneven changes for various causes of death in different racial and local groups. This paper explains the calculation of a simple index by which these variations can readily be compared."—*E. A. Esper* (Washington).

[See also abstracts 34, 35, 79, 102, 108, 117, 119, 120, 125, 131, 134, 136, 137, 138, 216, 226, 231, 232, 275.]

INDUSTRIAL AND PERSONNEL PROBLEMS

203. **[Anon.] Information and data regarding Bureau tests previously published.** *Pub. Person. Studies*, 1927, **9**, 195–201.—Gives results of further standardization of tests for teachers and for junior clerks. More adequate norms are tabulated for the aptitude tests for elementary teachers. For ability in teaching each of four elementary school subjects separate norms have been established. Evaluation of the aptitude test as a tool in selecting high school teachers resulted in reliability coefficients for members of the test battery from .40 to .88; for the total scores, .80. The correlation with supervisors' ratings of .54 became .75 when corrected for attenuation. For the tests in the junior clerk battery reliability coefficients range from .40 to .83. Computation of the coefficient for the battery as a whole resulted, probably partially due to chance, in the value .99.—*K. M. Cowdery* (Stanford).

204. **[Anon.] Vocational guidance and training in France.** *School & Soc.*, 1927, **26**, 450.—*H. L. Koch* (Texas).

205. **Bingham, W. V. The status of vocational guidance today in tests and measurements.** *Voc. Guid. Mag.*, 1927, **5**, 177–178.—Reviews recent psychological research on mechanical aptitude, interests, personality traits; progress made in accumulating biographical guidance data in schools; and recent publications.—*D. G. Paterson* (Minnesota).

206. **Bureau of Public Personnel Administration Staff. A proposed act providing an employment system for the federal service of the United States embodying modern conceptions of public personnel administration.** *Pub. Person. Studies*, 1927, **8**, 161–183.—The need for an act to unify and systematize federal personnel activity is outlined, followed by the text of the proposed bill. Explanations of the significance of various clauses are given in a series of notes.—*K. M. Cowdery* (Stanford).

207. **Dickinson, Z. C. Suggestions from employees.** Ann Arbor: University of Michigan, 1927. (Michigan Business Studies, Vol. I, No. 3.) Pp. 58.—Estimates indicate that over 300 American and British concerns employ definite systems for inviting, rewarding, and using suggestions from employees. Detailed data from about sixty plans form a basis for this study. Several prob-

lems of policy and practice are discussed, and the varied methods of solving them described. Suggestions cover a wide range of subjects, improved efficiency or economy of operations being most common; also safety and health, employee relations, comfort, convenience, and welfare. Suggestion plans are found valuable not only for resultant savings, profits and safety, but in increasing employees' interest in work and company. Incentives utilized may be financial, ranging from a dollar or two for accepted suggestions up to several hundred dollars in some cases, a common basis being to approximate 10% of the estimated first year's savings; or they may be non-financial—public recognition, prestige with company or fellow-workers, medals, certificates, etc. Suggestion plans have many features in common with employee-representation plans, and many companies employ both. The number of companies using suggestion-plans is increasing. The few reported cases where plans have been discontinued seem due more to other causes than to definite failure of the plans themselves.—*F. A. Kingsbury* (Chicago).

208. **Henig, M. S. Intelligence and safety.** *J. Educ. Res.*, 1927, **16**, 81–87.—Statistical study of the relation of intelligence, as tested by the Army Alpha, and number of accidents to the apprentices at the Essex County Vocational School at West Orange, N. J. The subjects were tested twice with different forms and with a two year interval between the testings. The results show that a direct relation exists between intelligence and liability to accidents. The lower the intelligence of the apprentice the more liable he is to accident and the more detailed should be the safety instruction given to him. "Boys in intelligence classes C — and D are so susceptible to accidents that for their own welfare, their acceptance as apprentices in a vocational industrial school is a questionable policy."—*S. W. Fernberger* (Pennsylvania).

209. **Kitson, H. D. Some problems of vocational adjustment.** *Voc. Guid. Mag.*, 1927, **5**, 271–273.—Disparages research results on tests and measurements. Advocates job analysis research and especially vocational histories as a basis for scientific guidance.—*D. G. Paterson* (Minnesota).

210. **Priest, I. G. Note on the relative comfort in reading by artificial daylight and unmodified gas-filled tungsten lamps.** *J. Opt. Soc. Amer.*, 1927, **15**, 131–136.—One case is reported in which artificial daylight served satisfactorily as an illuminant for reading while all amounts of unmodified light from the tungsten filament resulted in great discomfort. From a resumé of pertinent data, published and unpublished, it is concluded that daylight, natural or artificial, is superior to incandescent light for reading because it affords the reader greater acuity and greater power to sustain acuity.—*D. B. Judd* (Bureau of Standards).

211. **Schrammel, H. E. Factors in a college man's choice of a career.** *Voc. Guid. Mag.*, 1927, **5**, 214–218.—Reviews available statistical studies on college men's vocational choices.—*D. G. Paterson* (Minnesota).

212. **Walcutt, E. C. The annual meeting of the Assembly of Civil Service Commissions.** *Pub. Person. Studies*, 1927, **9**, 193–194.—An announcement of a program which among other topics includes short-answer tests, the validity, purpose and conduct of the oral interview, the testing and certifying of common laborers, the content of promotion tests.—*K. M. Cowdery* (Stanford).

[See also abstracts 45, 156, 235, 259.]

CHILDHOOD AND ADOLESCENCE

213. **Ament, W. Die Seele des Kindes.** (The mind of the child.) Stuttgart: Franckh'sche Verlagshandlung, 1925. Pp. 95.—The author traces mental

development from the beginnings of fetal sensitivity to adolescence. He gives an account of the beginnings of impulsive and reflex movements, the functioning of the sense organs and the appearance of the affections in the new-born infant. Man is distinguished from other animals by the upright posture, reason, speech and consciousness of self. The development of these human characteristics, memory, perception of time and space, and thought are traced. Special attention is given to the development of facial expression of the emotions and play activity in the child. The book is well illustrated and contains a bibliography.—*M. Meenes* (Lehigh).

214. **Brainard, P. P. Some observations of infant learning and instincts.** *Ped. Sem.*, 1927, **34**, 231–254.—Development of the eye-hand coördinations in one child are described in detail. For one thing it is pointed out that the failure of children to show this development in the very first months is in part due to no overlapping of the eye-exploring or eye-stimulus field and the hand-exploring or -stimulus field until the infant is placed in the sitting position. Walking depends more upon balancing with the body muscles than upon movement of the legs. Certain primary responses may be observed; pushing against pressure on soles, alternate leg movements, compensatory balancing movements, and random activity excited by various kinds of stimulations; but all combinations of these are acquired by practice. For talking and laughing, the primary responses observed are: breathing through the mouth, random movements of mouth parts and random tightening of vocal cords in varying tensions in response to intense stimulation, as pain or hunger. Social approval (smiles and frowns seen by the infant), and social duplication of the infant's sounds, are important factors in coördinations leading up to speech.—*J. F. Dashiell* (North Carolina).

215. **Kimmins, C. W. [Ed.] The mental and physical welfare of the child.** London: Partridge, 1927. Pp. 255. 6/–.—This book consists of a series of essays, by various eminent authorities, edited by Dr. C. W. Kimmins, who also contributes an introduction. The papers are as follows: "The health of the child in the formation of character," by Sir Bruce Bruce-Porter; "The mental hygiene of the pre-school child," by Dr. Arnold Gesell; "The health of the pre-school child," by Dr. Eric Pritchard; "The care of the eyes," by Dr. N. Bishop Harman; "Light and the health of the child," by G. Murray Levick; "The local authority and the health of the child," by Dr. G. A. Auden; "The health of the school-boy," by G. E. Friend; "The health of the school-girl," by Dr. Meredith Clements and "The training of teachers in health subjects," by Dr. M. J. Reaney. Throughout the treatment is untechnical and practical. While some of the essays are necessarily somewhat general, others, particularly those by Pritchard, Harman, Levick, Friend and Clements, convey a great amount of practical information and make a number of suggestions which parents and psychologists should consider.—*F. C. Bartlett* (Cambridge).

216. **Lehman, H. C., & Anderson, T. H. Social participation *versus* solitariness in play.** *Ped. Sem.*, 1927, **34**, 279–289.—Children reporting their plays on a questionnaire were also rated by teachers in respect to many traits; and those whose reports indicated extremely social play received lower ratings in 24 out of 26 desirable traits and a higher rating in each of the 6 undesirable traits. Too much social participation in play is just as unwholesome as too little.—*J. F. Dashiell* (North Carolina).

217. **Lehman, H. C., & Michie, O. C. Extreme versatility *versus* paucity of play interest.** *Ped. Sem.*, 1927, **34**, 290–298.—Children were asked to report their plays on a questionnaire list furnished. No relationship was found between the variety of their interests and age, sex, or intelligence; but some relationship was found between the former and certain character-trait ratings made by teachers. It is stated that the versatile boys possess more powerful drives

but less self-control. It is asserted that neither an extremely large nor an extremely small number of play activities coexists with optimal personality development.—*J. F. Dashiell* (North Carolina).

218. **Lehman, H. C., & Witty, P. A. The psychology of play activities.** New York: Barnes, 1927. Pp. xviii + 242. $2.00.—The authors have considered as play "those behavior manifestations which individuals exhibit 'because they want to.'" From a list of 200 play activities children were asked to indicate (1) those engaged in voluntarily during the week preceding the investigation; (2) the three activities liked best; (3) the one activity to which the most time had been given; (4) those in which participation had been solitary. It was found that (1) both sexes anticipated in most play activities and with equal frequency, the girls, however, showing less variability and more conservatism than the boys; (2) the play of city children differed conspicuously from that of country children and that of negro children from white; (3) there was little seasonal variation; (4) "pedagogically retarded children turn to social plays more frequently than normal or accelerated ones" (p. 222); and (5) "acceleration did not effect a reduction either in the number of different activities engaged in or the extent to which the child participated with others in recreational activities" (p. 210). A number of references are given at the end of each chapter.—*M. Goodrie* (Clark).

219. **Murchison, C., & Langer, S. Tiedemann's observations on the development of the mental faculties of children.** *Ped. Sem.*, 1927, **34**, 205–230.—A translation of a series of observations, published first in 1787, showing much discrimination and insight and in places anticipating latter-day interpretations of the phenomena of infancy and childhood.—*J. F. Dashiell* (North Carolina).

220. **Pastori, G. Sulla frequenza della eredolues nei fanciulli anormali.** (On the frequency of hereditary syphilitic infection in abnormal children.) *Pubbl. Univ. Cattol. Milano*, 1925, Serie VI, **3**. Pp. 132.—The authoress studied the clinical history of 209 abnormal, or backward, children between the ages of 6 and 16, finding that there is a considerable frequency of hereditary syphilitic infection among them. The diagnosis was based on the Wasserman test, physical examination, and anamnesis, each used separately in some cases and combined in others. Of the 209 subjects 44 were found to be certain cases and 55 probable cases of hereditary syphilis. Of these 99 cases the hereditary syphilis in 45 was associated with other factors such as alcoholism, tuberculosis, goitre, etc.—*R. Schwarz* (George Washington University).

221. **Peters, W. Die Entwicklung von Wahrnehmungsleistungen beim Kind.** (The development of perceptions in children.) *Zsch. f. Psychol.*, 1927, **103**, 129–184.—The author tries to throw light on the problems involved in the development of perceptive responses in children by considering the factors which are operative in threshold determinations. A distinction is drawn between modality threshold (the subject states whether or not a certain stimulus is perceived), quality threshold (the subject states whether or not a special characteristic of the stimulus is noticeable) and differential threshold. These thresholds are considered in their relation to the thresholds distinguished by von Kries and Wundt. It is suggested that the differences between different developmental curves for perceptive responses in children may be differences between curves of modality sensitivity, quality sensitivity and differential sensitivity. Peters points out that determinations of modality and quality thresholds do not necessarily require acts of comparison and differentiation in the subject, whereas such acts always must take place in determinations of the differential threshold. In other words the intellectual abilities of comparing, abstracting, etc., influence the developmental curves of perceptive responses which are based on differential threshold determinations, to a greater extent than the curves based on quality

and modality threshold determinations. Of course, the three kinds of curves are determined not only by intellectual factors but also by sensory factors. But it must be assumed that the intellectual requirements of the quality threshold are lower than those of the differential threshold and higher than those of the modality threshold. All the available facts are examined and it is found that the various developmental curves can be satisfactorily explained on the basis of this hypothesis. The rôle of age changes in the sense organs is considered.—*H. Klüver* (Columbia).

222. **Porter, W. T., & Baird, P. C., Jr. Weight and the month of birth.** *Amer. J. Physiol.*, 1927, **81**, 1–5.—The median weight of boys born between January and June is at certain months somewhat less than that of boys born in the same year between the months of July and December. At other months in the developmental period there is no difference in the median weights of these groups, while at still other months the boys born in the first half of the year are slightly heavier. Charts are presented to explain these fluctuations of median weight of the two groups on the basis of variations of seasonal growth.—*M. J. Zigler* (Wellesley).

223. **Root, W. T. Psychology for parents.** Univ. of Pittsburgh Radio Pub. No. 29, 1927. Pp. 55.—A series of seven non-technical talks broadcasted from the University of Pittsburgh Studio. The topics discussed are: incidental learning, habits and formal learning, individual differences, newer methods in education, discipline, childhood fears, and the use of leisure time. A selected bibliography is appended.—*M. Goodrie* (Clark).

224. **Scharlieb, M. The psychology of childhood, normal and abnormal.** London: Constable, 1927. Pp. xi + 194. 6/–.—Scharlieb writes, not especially for the technical psychologist, but "for the assistance of parents in their difficult and important task of preparing the children of the present day to be the parents of the future." She first deals with the normal child, giving a sketch of its sensorial development in its early days, and taking in order vision, hearing, taste, smell, touch and "muscle sense." Next she considers the normal acquisition of speech and the growth of certain temperamental characteristics. After a brief treatment of the child's religion she passes to a general consideration of parental duties toward children. She now takes up the study of the unusual or nervous child, dealing in particular with certain relatively common troubles of a physiological or semi-physiological character. Under the heading of "The difficult child" she discusses similar common abnormalities of a more psychological order. A treatment of the "backward" child leads to a more detailed consideration of "mental unsoundness" (defined as an acquired mental derangement) and mental deficiency (defined as an innate defect). The so-called moral imbecile has a chapter to himself, and there is a very brief additional note on the "mongolian" child. The book concludes with a chapter of advice on "Suggestion, discipline and punishment," and a short, but well-chosen bibliography.—*F. C. Bartlett* (Cambridge).

225. **Swift, E. J. The psychology of youth.** (New ed. of *Youth and the Race.*) New York: Scribner's, 1927. Pp. xiii + 342. $2.50.—Except for the change in title and the addition of a new three page preface, the 1927 edition is identical with that published in 1912. However, the author now addresses himself to a new audience. The general character and purpose of the book are illustrated by the following quotations: (1) "The rôle which racial instincts play in the emotions, intellect, and will of children has been the subject of many investigations in recent years by those interested in the psychology of childhood. These studies, however, have had but little effect upon the methods of the schools. . . . The author has tried to indicate how the schools may help to transform into intellectual and moral forces the racial instincts which, as manifestations of orig-

inal sin, distressed our forefathers." (From the preface to the first edition.) (2) "The purpose of this book is to help parents to understand their children after they have passed the age of ten. . . . Whatever control they have exercised in the past has been largely through obedience, but now is the time for the beginning of self-control based on social and ethical motives. The method of this training and the psychology underlying it were the aims of the author in writing the *Psychology of Youth.*" (From the preface to the second edition.)—*F. L. Goodenough* (Minnesota).

226. **Waring, E. B. The relation between early language habits and habits of conduct control.** *Teach. Coll. Contrib. Educ.*, No. 260, 1927. Pp. vi + 125. —This study concerns itself with the general problem indicated in the title and the specific hypothesis "that conduct control is a development whose stages are attended by and intrinsically associated with definite and characteristic language habits." Evidence from current practice is presented to show the use of the relationship in developing a new physical skill (swimming), in correcting old physical habits (posture) and in developing standards of social-moral behavior (ideals). Three types of current psychological theories—(1) conditioning, (2) integration, equilibrium, or complacency, and (3) configuration—are next examined, and it is shown that the author's thesis finds sanction on the basis of all three of these. To test the specific hypothesis, two experiments were devised with children from two to five years of age, in whom improvement in test situations requiring gross motor and discriminative skill was observed under the two experimental factors of language and non-language approval. Two groups of five children each with similar intelligence quotients and mental ages were the subjects. In the first experiment one group received for successful responses a nod and a smile and the word "Benito," which was meaningless to all the children. With the other group the word "Benito" was omitted. Significant differences in favor of the language group were established. The author concludes that "The less obvious to the child the success of his efforts, the more can language approval be depended upon to further the generalizing of the concept of success and therefore to operate as a factor in conduct control," and further, "The greater the similarity between the practice situations and the test situations, the more effective is the experimental factor of language approval as a means of furthering a generalized concept of success which may function as a conduct control." In the second experiment the common English words appearing most frequently in the spontaneous conversation of the children were used for language approval, and the experimental procedure was varied so as to compare the responses of each child under the two experimental factors for the two trials. Certain irrelevant factors—"end limitation" (perfect scores), failure, practice, and carry-over tended to obscure results, but "the hypothesis is sustained even with the irrelevant factors tending to limit and to diffuse the effectiveness of . . . language approval." In a final chapter possible experiments are outlined to obtain answers to such questions concerning language approval as: "(1) Whether it is as effective in the development of social-moral habits as it has been found to be with physical and discriminative skills. (2) What sort of play materials contribute to its development. (3) What sort of adult guidance is most conducive to its development. (4) What limitation upon its development is set by native intelligence."—*H. H. Remmers* (Purdue).

227. **Wilson, L. L. W. Youth's social environment.** *School & Soc.*, 1927, **26**, 444–450.—The paper presents a survey of the usually alleged mental, physical, and social needs of our adolescents, and offers some suggestions for ways of meeting these needs.—*H. L. Koch* (Texas).

228. **Zyve, C. I. Conversations among children.** *Teach. Coll. Rec.*, 1927, **29**, 46–61.—This study is the analysis of the free conversation of thirty third-grade

children of the San José State Teachers' College Training School during two daily periods of fifteen minutes each, during the period from March 10 to June 10, 1926. The subjects discussed were studied under ten general categories: school work, group control, cooperative activities, home play, auto trips, minor affairs, English usage, miscellaneous, animals, and special subjects. School work ranged from 23.3% to 9.2%, with an average of 14.4% for the whole experiment. Group control varied from 11.5% in the first period to 5.3% in the third. Cooperative activities changed from 15.4% to .6% in the second. Play description held the largest place, the range being 20.3 to 35.5%. Auto trips increased from 9.6 to 22.6%. A significant decrease occurred in minor personal affairs—4.7 in the first to 1.6% in the last period. Corrections of English usage increased from .4 to 2.4%. Special subjects increased greatly—7.5 to 17.6%. Evidence is presented for the conclusion that there is a leveling process in the amount of participation as the experiment proceeded, the voluble becoming less so, and the reticent more talkative. The vocabulary is studied, showing a close correlation with the number of new topics introduced. Very little slang was used. A tabulation of the parts of speech is made.—*H. H. Remmers* (Purdue).

[See also abstracts 30, 121, 132, 141, 143, 173, 186, 266, 278.]

EDUCATIONAL PSYCHOLOGY

229. **Aydelotte, F. Breaking the academic lock-step.** *School & Soc.*, 1927, 26, 407–410.—The author describes some of the pernicious effects of the prevailing academic system upon the intellectual habits of talented students. For such students Swarthmore's plan for a degree with honors is alleged to be productive of salutary results. A broad contract, little formal instruction, careful counselling, and much independent work characterize the plan.—*H. L. Koch* (Texas).

230. **Baker, H. J. Characteristic differences in bright and dull children.** Bloomington, Ill.: Public School Publishing Company, 1927. Pp. viii + 118. $1.50.—The author defines "bright children" as those pupils whose I.Q.'s range from 100 to 130. "Dull children" are those whose I.Q.'s range from 70 to 90. The "characteristic differences" treated are those which are observed by teachers in classroom situations. The teachers who reported their observations were five hundred teachers in the Detroit public schools, selected by the principals because they were judged to be successful in dealing with bright pupils or with dull pupils. The judgments of the teachers were checked with the reports from the examiners and field workers of the Detroit Psychological Clinic. Detroit has employed the X Y Z grouping of children since 1920. Hence the selection of the teachers and their reports, as well as the reports of examiners and field workers, are based upon considerable experience. The book is divided into three parts. Part I includes five chapters presenting a theoretical and critical discussion of the concepts of general intelligence, special abilities, and other differences. Part II includes fifteen chapters devoted to the report of a summary of the teachers' observations of characteristic differences of bright and dull pupils. These are discussed under the categories of the conventional school subjects and the special subjects, with the addition of observations in the library and the auditorium. Part III, including three chapters, presents the differences in teaching methods which should be employed because of the characteristic differences observed. The book constitutes a definition of intelligence in terms of school behavior. There is no statistical treatment of the material presented. The book is full of suggestions of subjects for experimental investigation. The

author promises that his conclusions will be subjected to experimental verification.—*J. C. DeVoss* (San José State Teachers College).

231. **Benedito, R. Como se enseña el canto y la música.** (How music and songs are taught.) *La Obra*, 1927, **7**, 196–197.—Deploring the fact that school songs lack the thought and careful selection necessary to preserve the integrity of ideas and emotions commensurate with the age of the child, Benedito suggests that songs be of simple theme, of corresponding melody, and, above all, of interest to the child. A school chorus participating in public affairs, e.g. "fiestas," simple public ceremonials, and the like, would be of value in maintaining interest, besides giving the effort a certain sense of civic worth. Benedito believes the child receives a distorted sense of patriotism from the ordinary patriotic song. Mere rhyming of words and martial tempo do not contain the essence of patriotism, but rather it is the song of the "pueblo," the song of the people, something more akin to the true spirit of the land that is patriotism. It is from this that the child will get a true sense of value of his country and his place therein.—*R. Williams* (San José).

232. **Bovet, P. En torno a algunos problemas psicológicos de la education para la paz.** (Concerning some psychological problems of education for peace.) *La Obra*, 1927, **7**, (Nueva Era), 20–24.—The child has been considered as almost infinitely receptive and also as an active being. Generally, however, the emphasis has been placed upon the former, and, as accent is placed upon one or the other, so is the perspective of educational problems altered. The plastic mind of the child is a tablet upon which may be engraved the indelible experiences of humanity. As an organism the child reacts, the earliest expressions of which are in the form of play. According to Karl Groos, play is the means whereby the young animal secures training for the more serious business of adulthood. The instinct of rivalry in the child is very actively manifested in games. This probably has a biological significance as a factor in developing protective qualities, particularly valuable to primitive man. As the child (more in the boy than in the girl) approaches puberty, these manifestations are seen in the deeds by which admiration is sought, the devices employed to gain favor of the desired one indicating, at least, that the relation between the instinct of rivalry and the sexual instinct is very close. These instincts, repressed by social needs, may be dangerous repressions or they may be sublimated. It is the task of education to begin this sublimating process in the early years of childhood, and it is to this process of sublimation that civilization owes some of its highest advancement. The educator has a powerful ally in the gregarious instinct. The community of mutual interests and the furthering of mutual projects assumes the nature of family interests—a patriotic sense directed toward the family, then the group, then society. By education it is possible to direct these same interests and instincts not only toward the family, the clan, the community, the state, but toward humanity. In such a state one would be a "cosmopolitan"—a citizen of the world. The way seems to lie in a moral, social, and religious education.—*R. Williams* (San José).

233. **Brolyer, C. R., Thorndike, E. L., & Woodyard, E. A second study of mental discipline in high school studies.** *J. Educ. Psychol.*, 1927, **18**, 377–404.—A serious attempt is made to solve the problem of the relative amount of transfer value accruing from the pursuit of one subject for one year. The method is to test at intervals of one year large numbers of high school pupils with a test of general mental alertness consisting of such tests as arithmetic problems, absurdities, various forms of the records of analogies, and some tests of spatial relations. The present study is a continuation of one reported in 1924. Both of them together have used the reports of more than 13,000 pupils living in a large number of cities. The impossibility of finding pupils' courses

of study with three subjects the same and one different was immediately apparent, so that several subjects which preliminary investigation showed to resemble one another very closely were grouped under one heading. By this means it was possible to compare the influence of taking certain groups of subjects for one year upon the scores in the intelligence tests. Certain subjects stood out clearly in both investigations. The natural sciences, mathematics, business arithmetic, and bookkeeping were always high in mental discipline as measured by improvement on the tests while dramatic art and domestic science were low in mental discipline on both occasions.—*A. M. Jordan* (North Carolina).

234. **de Weerdt, E. H. The permanence of improvement of fifth-grade school children in certain mental functions.** *J. Educ. Res.*, 1927, **16**, 127–131.—Study made on 49 children in a typical fifth grade at New Haven, Conn. Average chronological age was 10 years. The following tests were used: Symbol-digit substitution; Thorndike addition, Chapman-Cook Speed Reading test, Woodworth-Wells Cancellation, a new multiplication and Same-Opposite Test arranged for this study, and a rearrangement of the Thorndike multiplication by substitution sheet. The practice varied for each of the tests and totaled 260 minutes for all of them. The Illinois Examination I, Form 1 was given to all of the subjects. The author concludes that "the general intelligence test gives within certain limits not only a fair indication of capacity for variability of response but also of relative capacity for improvement and for retention of improvement. . . . Accurate prediction in specific cases always requires a careful analysis of the individual's problems."—*S. W. Fernberger* (Pennsylvania).

235. **Franklin, E. E. The permanence of the vocational interests of junior high school pupils.** *Voc. Guid. Mag.*, 1927, **5**, 152–156.—1500 7B junior high school pupils in Baltimore stated in December the one occupation they would most like to enter and subsequently re-stated their occupational choice in May, in October, and in December. Tabulations were made showing percentages adhering to their original choices throughout the year. A 15-fold occupational classification was used and the trends were studied in relation to sex and a 5-fold I. Q. classification. Vocational interests for the group studied show a very high degree of permanence during the one year period.—*D. G. Paterson* (Minnesota).

236. **Good, C. V. The supplementary reading assignment.** Baltimore: Warwick & York, 1927. Pp. 227.—This book is designed for the use of teachers in normal schools, teachers' colleges, and teacher-training classes, and for students in education. It treats, primarily from the educational rather than the psychological viewpoint, the methods and uses of less formal and supervised reading material. The style is readable, clear, and to the point.—*D. G. O'Connor* (Clark).

237. **Henmon, V. A. C. Educational psychology.** *Psychol. Bull.*, 1927, **24**, 381–390.—A review of 183 titles appearing in this field between April, 1926, and April, 1927. The general texts reflect the conflicting conceptions in the psychology of today. In the psychology of learning there has been some falling off of studies in mental work and fatigue and in transference. Of the school subjects, reading has received much attention and arithmetic and writing some. In the pre-school child, also in the exceptional child, interest continues unabated. —*J. F. Dashiell* (North Carolina).

238. **Hines, H. C. The honor system and the normal curve.** *School & Soc.*, 1927, **26**, 481–485.—It is the author's thesis that "no honor system, in and of itself, does anything to raise the level of good moral conduct when we consider the large groups affected by its administration." There is no absolute goodness. Honesty is a matter of interpretation or code. The standards of the judged are changed to justify their conduct, while the standards of those who judge adapt to the situation evaluated. Though the code may be altered, the distribution of

honesty according to the normal curve will still prevail.—*H. L. Koch* (Texas).

239. **Jones, H. E. A comparison of the intelligence of extension and college undergraduate students.** *School & Soc.*, 1927, **26**, 469–470.—The Army Alpha Intelligence Test given to 452 students in Columbia College classes yielded a median score of 171.2 with a S.D. of 18.2. For 418 students registered in the extension courses offered by Columbia University the analogous measures were 148.7 and 26.4. The author concludes that an attempt to do equivalent work in parallel classes in the two departments of the University disregards a fundamental disparity in the equipment of the students concerned.—*H. L. Koch* (Texas).

240. **Kitson, H. D. How to use your mind.** (3d ed.) Philadelphia: Lippincott, 1926. Pp. 224. $1.75.—Intended as a psychology of study, the book is particularly useful to the layman and college freshman as an aid in the formation of proper study-habits. Adopting the view that education is a process of mental habits, special emphasis is laid upon study-habit formation, note-taking, reasoning, memorizing, examinations, and allied topics. Physiological factors insuring best efficiency are discussed and suggestions for obtaining that efficiency are presented. Each chapter contains suggested readings and exercises, together with appropriate drawings and diagrams. An index and three pages of suggested further readings are appended.—*R. Williams* (San José).

241. **Leland, B. Wilbur.** *J. Educ. Res.*, 1927, **16**, 132–135.—Report of a case of an intelligent child who encountered great difficulty in school work, until it was discovered that he had defective vision which could be corrected.—*S. W. Fernberger* (Pennsylvania).

242. **McVey, F. L. Who should go to college?** *School & Soc.*, 1927, **26**, 410–414.—The author maintains that the question of who should go to college can be decided only when we have analyzed carefully our whole educational system and have defined college purpose. Neither of these has as yet been satisfactorily accomplished.—*H. L. Koch* (Texas).

243. **Miller, J. Program of a psychologist in a high school.** *School & Soc.*, 1927, **26**, 367–368.—A brief is presented for permanent psychological or personnel bureaus in high schools. Activities suggested as feasible for such bureaus are: the keeping of a personal record for each student, the treatment of problem cases that arise in the school, the popularization of mental hygiene ideals through clubs and lectures, the dispensing of vocational and educational advice, the establishment of an employment bureau, and the securing of aid for the needy student of whatever sort.—*H. L. Koch* (Texas).

244. **Morrison, R. H. Factors causing failure in teaching.** *J. Educ. Res.*, 1927, **16**, 98–105.—The article is the result of 40 interviews with school superintendents and members of school boards in an effort to discover concrete causes for the dismissal of teachers. In all 45 such causes are listed, varying in frequency from 17 times mentioned (poor discipline) to 11 factors mentioned only once.—*S. W. Fernberger* (Pennsylvania).

245. **Muller, H. H. Character rating in the high schools.** *Voc. Guid. Mag.*, 1927, **5**, 208–211.—A questionnaire study of present practices in New York high schools with statistical tabulation of frequency of character traits rated.—*D. G. Paterson* (Minnesota).

246. **Powers, J. O. The junior high school: a study of instructional results in a typical city system.** Minneapolis: Univ. of Minnesota Press, 1927. Pp. xii + 125. $2.00.—The monograph is an evaluation of the work in the junior high schools of Minneapolis, particularly in regard to percentage of pupil retention, amount of time saved, improvement in scholastic performance, and recognition of individual differences in junior high schools in comparison with high schools organized on the old junior-senior plan. In addition to the sections

which treat the topics listed above there is a chapter on teaching load for different subjects and time expenditure of pupils per subject, one on the qualifications of junior high school teachers and one on vocational guidance. The evaluation is made on the basis of numerical data obtained from the schools and on the basis of the results of intelligence tests and educational tests and measurements.—*A. H. Arlitt* (Cincinnati).

247. **Ruediger, W. C. The permanence of educational effects.** *School & Soc.*, 1927, **26**, 369–373.—An attack is made upon Buckingham's doctrine that the greatest waste in our education is forgetting through disuse. It is the author's contention that an encyclopedic education is not our objective. Growth in adult adjustments is effected largely through the interests, sympathies, tolerances, standards, and generalizations built up in pre-adult life and not through the formal review of school subjects. To be sure, our attitudes develop out of a one-time mastery of the details of subject content; but, once acquired, they are not dependent upon these details for adequate functioning.—*H. L. Koch* (Texas).

248. **Ryan, W. C., Jr. Individual methods and the primary school teacher.** *School & Soc.*, 1927, **26**, 345–353.—The author declares himself as favoring freedom in our educational system from the restrictions of a content long outgrown; freedom from conventional instruction methods, routines, and discipline; as well as intellectual freedom for the teacher.—*H. L. Koch* (Texas).

249. **Seashore, C. E. Learning and living in college.** *Univ. Iowa Stud.: Series on Aims and Progress of Research*, 1927, Vol. II, No. 1. Pp. 124.—This volume is an outcome of work in "The Gifted Student Project" under the auspices of the Division of Educational Relations and the Division of Anthropology and Psychology of the National Research Council. The author presents his own constructive program for higher education, based on his experience in this work. The monograph includes a discussion on: What is the college for, who should go to college, departmental placement examinations, freshman week, the individual in the classroom, sectioning on the basis of ability, individualization of the laboratory, the project method of individual instruction, education for democracy and the junior college, honors and awards, and an open letter to a college senior. The author states the goal of education to be "to keep each individual busy at his highest natural level of successful achievement." He advocates particularly sectioning on the basis of ability, some form of the project method of individual instruction, and the organization of junior colleges.—*B. Wellman* (Iowa).

250. **Smith, M. Education and the integration of behavior.** *Teach. Coll. Contrib. Educ.*, No. 261, 1927. Pp. vi + 93.—Two fundamental psychological theories of behavior are examined, criticized, and found wanting: (1) that which conceives the environment, through the stimulus, as determining behavior; (2) that which makes visceral cravings the determinant. The historical background for the first theory is found in the discovery of localized sensory and motor areas in the brain. The second theory, most definitely worked out by Kempf, is based on recent physiological discoveries. The two theories in their fundamental assumptions are antithetical in that the one views the environment in isolation, the other internal organic factors only. Both are inadequate because they consider the environment as a fixed factor, instead of focusing on the essential factor, the organic-environmental relationship. Criticisms of various authors (Thorndike, Watson, Woodworth, McDougall, Thurstone, Koffka) as to various points of view held are made in relation to one or the other of the two theories discussed. A third theory of behavior is offered which shall square with the organic-environmental relationship which is the essential factor in behavior. Instead of beginning with a stimulus in the environment or with a visceral tension (resulting

from fundamental biological needs) it is proposed that a correct formulation of behavior must account for behavior which is essentially "surplus" activity, in that it satisfies no nutritive or reproductive needs, either directly or indirectly. A physiological-biological basis for this activity is found in the proprioceptors, which are receptors consonant with instability of the central nervous system. The proprioceptors and visceral impulses ally themselves with the exteroceptive impulses, and all behavior thus may be viewed as a result of the integration of internal and external factors. This viewpoint is defended on the basis of the work of physiologists and neurologists, especially Sherrington, Child, and Herrick. As a substitute formula for S–R, the author proposes N–SR–C, (N = needs, SR = interdependent sensorimotor action essential to meeting organismic needs, and C = environmental changes). Instead of accepting the concept of instincts as preformed hereditary behavior patterns, the author, taking his departure chiefly from Child's work, comes to the conclusion that a truer concept is that of hereditary potentialities in each organism, not all of which can be realized in its lifetime, and from which the environment, through the organism's reaction upon it, selects. The importance of this view for education is emphasized. As an organism is essentially the result of cooperation of part with part for the welfare of the whole, so human society is viewed as a projection of this biological scheme. Education has the task of making this factor in survival a conscious aim. In education as practiced two opposed theories of the educative process and the function of the teacher are held; the first holds the teacher responsible for supplying the proper stimuli to secure appropriate responses; the second finds in the child's purposes and motives the dynamics that should determine behavior. Education can be effected, as skills and knowledge on the one hand and purposing on the other are viewed not as ends in themselves, but in their relationship to each other. The final chapter describes in rather popular language an uncontrolled experiment in the Pittsburg School for Childhood, where projects formed the basis of the curriculum.—*H. H. Remmers* (Purdue).

251. **Spencer, L. T. College achievement of private and public school entrants.** *School & Soc.*, 1927, **26**, 436–438.—Among the Yale students those prepared in the public schools are superior to those prepared in private schools in intelligence-test score, academic grades, frequency of graduation, and freedom from resignation. The group which is a product of both public and private schools occupies for the most part an intermediate position, whereas the college transfers rank lowest in all respects studied. The order of merit, on the other hand, as far as entrance-examination grades are concerned, is private-school group, mixed group, and public-school group.—*H. L. Koch* (Texas).

252. **Starch, D. Educational psychology.** (Revised ed.) New York: Macmillan, 1927. Pp. ix + 568. $2.60.—This is a revision of the text which was originally published in 1919. The book is in three sections. The first is a discussion of the native equipment of human beings; the second a consideration of the general psychology of learning; the last a detailed discussion of the psychology of the several elementary school subjects. This edition adds a brief new chapter on Mental Hygiene and brings up to date the summaries of the more important researches which have been made since the first appearance of the text, notably in the psychology of reading, arithmetic, history, and the other school subjects and Professor Thorndike's work on the transfer of training and mental discipline.—*E. O. Bregman* (Child Study Assn. of America).

253. **Sturtevant, S. M., & Strang, R. The daily schedule as an aid to advisors.** *Teach. Coll. Rec.*, 1927, **29**, 31–45.—Reviews methods of studying the individual and sources of inaccuracy in previously used forms of daily schedules or itemized lists of daily activities, and presents arguments for an unclassified, chronological record. Results for fifty-nine ninth year Horace Mann School

girls are discussed, relative to difficulty, laboriousness, possibility of leading to undesirable introspection, and accuracy. Value of the schedule to the student, the advisor, teachers, and parents, and in research, is discussed.—*H. H. Remmers* (Purdue).

254. **Sudweeks, J. Practical helps in teaching spelling: summary of helpful principles and methods.** *J. Educ. Res.*, 1927, **16**, 106–118.—A bibliography of 60 titles is analyzed with regard to the different factors involved.—*S. W. Fernberger* (Pennsylvania).

255. **Symonds, P. M. Needed research in the field of measurement in secondary education.** *J. Educ. Res.*, 1927, **16**, 119–126.—A program of 80 suggestions for future research classified under the following headings: characteristics of tests, new tests, characteristics of mental growth of children of high school age, problems related to prediction, use of tests in teaching, problems relating to marks, pupil placement, program and problems relating to the measurement of efficiency.—*S. W. Fernberger* (Pennsylvania).

256. **Symonds, P. M. A course in the technique of educational research.** *Teach. Coll. Rec.*, 1927, **29**, 24–30.—An outline of a course in educational research given by the author and arrived at on the basis of frequency of occurrence of procedures and processes in twenty-one Teachers College Contributions to Education.—*H. H. Remmers* (Purdue).

257. **Wallis, W. D. The new cults of Pythagoreans and Procrusteans.** *Ped. Sem.*, 1927, **34**, 271–278.—Statistical methods have become a number-venerating cult, being used too often with inadequate insight into the conditions and factors so treated. The assumption that the statistician is empirical is incorrect; "he is no more empirical than any other logician, but proceeds with deductions, about which he has little to say, to select facts about which he has much to say." This cult becomes Procrustean as students are treated not as individuals but are forced into group molds.—*J. F. Dashiell* (North Carolina).

258. **Washburne, J. N. An experimental study of various graphic, tabular, and textual methods of presenting quantitative material.** *J. Educ. Psychol.*, 1927, **18**, 361–376.—A short account of the economic history of Florence was prepared in several different forms, alike in most respects but differing from each other in changes in the methods of presentation introduced at stated points. Each form was tried out on from 200 to 300 pupils in a junior high school. The purpose of the experiment was to determine the effect on learning of different devices used in the presentation of the material. Among these were: a statistical table, a bar graph, a pictograph or a line graph, and data presented in narrative form. Some rather definite conclusions are drawn. Bar graphs are best in presenting complex or slightly complex static comparisons, but for extremely simple static comparisons the pictograph is best. For dynamic comparisons the line graph showed up best. Specific amounts are best presented in round numbers in a statistical table. It is a poor plan to present numerical data textually.—*A. M. Jordan* (North Carolina).

259. **Woodruff, K. A study in the occupational choices of high school girls.** *Voc. Guid. Mag.*, 1927, **5**, 156–159.—Analysis of vocational guidance questionnaire given to 1590 high school girls in Oklahoma City indicating the need of guidance in the choice of vocation.—*D. G. Paterson* (Minnesota).

[See also abstracts 35, 165, 175, 205, 208, 211, 269, 270, 271, 273.]

BIOMETRY AND STATISTICS

260. **Lufkin, H. M. The accuracy of the method of constant stimuli.** *Amer. J. Psychol.*, 1927, **38**, 666–667.—The correlation between c and h tends to

be high in data for lifted weights and low in experiments in visual perception. These conditions raise a doubt as to the value of the phi-gamma hypothesis.—*G. J. Rich* (Institute for Juvenile Research).

261. **Muenzinger, K. F. Critical note on the reliability of a test.** *J. Educ. Psychol.*, 1927, **18**, 424–428.—Raises questions concerning the applicability of the reliability coefficients, coefficients of alienation, and the concept of the true grade, to the old type of examination. This older type of examination is hard to divide into two equivalent tests because the questions can hardly be matched, since some of the questions are answered by logic and some by rote. The r_{12} then may express the degree of homogeneity of the material measured as well as the degree of standardization of objective and subjective conditions of the test. This lack of homogeneity of material depends on the variations in teaching methods. This variation also affects the use of the coefficient of alienation. The concept of true grade is theoretically untenable.—*A. M. Jordan* (North Carolina).

[See also abstracts 257, 277.]

MENTAL TESTS

262. **Abelson, H. H. The improvement of intelligence testing.** *Teach. Coll. Contrib. Educ.*, No. 273, 1927. Pp. vi + 71.—This study represents an attempt to improve prediction of college success from intelligence tests by means of intensive item studies from the following tests: Thorndike Intelligence Examination for High School Graduates; Roback Mentality Tests for Superior Adults; Brown University Psychological Examination, 1924 Edition; Thurstone Psychological Examination IV (1919). College success criterion scores were calculated by the T scale technique, and the predictiveness of various types of responses studied. "The indications are that the new scoring method failed to produce any significant improvement, essentially because of the lowness of original correlation between the tests and the criterion scores on which the new scoring values were based and because of the dissimilarity of the group employed in determining the new scoring values with the group with which the values were tried in the scoring of the tests. The new technique must for practical purposes prove its worth with groups as dissimilar as those here employed, but it ought to receive a trial with tests showing higher validity coefficients than those used here. This implies experimentation in a field where criterion scores that are highly reliable can be found." It is suggested that the new item coefficient technique invented by McCall and used in this study will lead to fruitful experimentation in so far as variables with such low correlation with criteria, low reliability coefficients, and dissimilarity of groups are controlled. Three appendices: (1) outlining suggestions for decreasing the labor involved in item analysis, (2) containing various supplementary data, and (3) a bibliography of 45 titles, are included.—*H. H. Remmers* (Purdue).

263. **Arnold, H. L. Analysis of discrepancies between true-false and simple recall examinations.** *J. Educ. Psychol.*, 1927, **18**, 414–420.—Three types of examinations were used with students who had similar training and with those who had dissimilar training. The three types of examination consisted of: (1) 100 items to be recalled, (2) 100 items of a true-false examination with the false statements quite ridiculous, and (3) 100 items of a true-false examination in which the false statements were less ridiculous. The correlation between (1) and (2) is .437; that between (1) and (3) .41 when the training of the subjects was dissimilar; and about .75, when the training was similar. The author thinks that true-false examinations are a mixture of (1) memory, (2) discrimination, and (3) resistance to suggestion. Unless the false statements are very ridiculous

there is a stronger tendency to mark the false statements true than to mark the true statements false.—*A. M. Jordan* (North Carolina).

264. **Buchanan, M. A., Crawford, J. P. W., Keniston, H., & Henmon, V. A. C. American Council Alpha Spanish test.** New York: World Book Co., 1927. —This test is divided into two parts, each lasting forty-five minutes. Part I contains a multiple choice vocabulary test and a grammar test, generally of the completion type. Part II contains a silent reading test, with questions in Spanish to be answered in English, and a picture about which the student writes a Spanish composition to be rated by means of a scale included in the manual. The authors give the following reliability coefficients: vocabulary, .92, and reading, .86, based on a sampling of two hundred seventy high school pupils, and grammar, .84–.91, based on various samplings of high school classes. They include norms and percentile ranks for each semester from the first year of high school through the third year of college. Two equivalent forms of the test are available.—*R. G. Sherwood* (Stillwater, Minn.).

265. **Callcott, F., Williams, R. H., & Wood, B. D. American Council Beta Spanish test.** New York: World Book Co., 1927.—This test for elementary Spanish students requires ninety minutes for administration. It is divided into three parts; Part I is a multiple choice vocabulary test; Part II is a comprehension test, with five possible endings for each statement; Part III is a grammar test of the completion type. The answers for Parts I and II are indicated by numbers, and all answers are written in the right-hand margin. Reliability coefficients computed from a thousand cases are: for the entire test .96, for Parts I, II, and III, respectively, .91, .93, and .95. With high school and college extension grades in elementary Spanish courses as criteria, coefficients of validity average about .70. Two equivalent forms of the test are available.—*R. G. Sherwood* (Stillwater, Minn.).

266. **Cunningham, K. S. The measurement of early levels of intelligence.** *Teach. Coll. Contrib. Educ.*, No. 259, 1927. Pp. vi + 74.—The results of this study are based on the testing of 257 children, ages 2½ to 5½ years, drawn from public and private schools and day nurseries. The Thorndike C A V D tests (completions, arithmetic, vocabulary, and directions) were used. Evidence to support the following more salient conclusions is presented: "The correlation between C A V D and Binet Tests was .92" (N = 119). "On the whole the C A V D Test was found to be quite as attractive for young children as tests of this type could be expected to be." A fairly constant increment in C A V D scores obtained over the age range studied. There was no suggestion of a decrease of the rate of growth. In comparison of adult imbeciles with the children in question it was found that at younger mental ages the children surpassed the adults, but that at the higher mental ages the opposite was true. It is suggested that this may throw light upon the relationship of degree of intelligence to ability to profit from experience. Children tended to surpass adult imbeciles more at the earlier than the higher levels in completions, arithmetic, and vocabulary, but to maintain superiority throughout all the levels in directions. Individual items showed marked differences for the children and adult imbeciles. There is a tendency for the C A V D Test to underestimate mental age of children with a Binet mental age of about six years when compared with adults; those of mental age of three tend to be overestimated. It is suggested that there are characteristic differences in the mental processes of the same mental age but of widely varying chronological ages. Two appendices, one giving samples of the C A V D Test, the other outlining a procedure for recording a child's attitude toward a test situation, are included.—*H. H. Remmers* (Purdue).

267. **Greenberg, J., & Wood, B. D. American Council Beta French test.** New York: World Book Co., 1927.—This test for elementary French students re-

quires ninety minutes for administration. It is divided into three parts; Part I is a multiple choice vocabulary test; Part II is a comprehension test, with five possible endings for each statement; Part III is a grammar test of the completion type. The answers for Parts I and II are indicated by numbers, and all answers are written in the right-hand margin. Reliability coefficients computed from two thousand cases are: for the entire test, .97 +, for Parts I, II, and III respectively, .94, .96, and .96. With high school and college extension grades in elementary French courses as criteria, coefficients of validity average about .70. Two equivalent forms of the test are available.—*R. G. Sherwood* (Stillwater, Minn.).

268. **Henmon, V. A. C., Morgan, B. Q., Hinz, S. M., Purin, C. M., & Rossberg, E. American Council Alpha German test.** New York: World Book Co., 1927.—This test is divided into two parts, each lasting forty-five minutes. Part I contains a multiple choice vocabulary test, and a grammar test, generally of the completion type. Part II contains a silent reading test, with questions in German to be answered in English, and a picture about which the student writes a German composition to be rated by means of a scale included in the manual. The authors give the following reliability coefficients: vocabulary, .94, and reading, .87, based on samplings of more than six hundred and five hundred college students respectively, and grammar, .82–.89, based on various samplings of college classes. They include norms and percentile ranks for six high school semesters and for four college semesters. Two equivalent forms of the test are available.—*R. G. Sherwood* (Stillwater, Minn.).

269. **Hildreth, G. Functions of the Department of Psychological Measurement in the Lincoln School of Teachers College.** New York: Columbia Univ., Teach. Coll., 1927. Pp. 31.—A description of the psychological work being done in the Lincoln school, subsumed under the following headings. (1) The administration of testing devices, (2) The employment of test results in pupil classification, (3) Intensive study of problem pupils, (4) Diagnostic and remedial work in the fundamental processes, (5) Supplementary cooperative activities, (6) Records and reports, and (7) Research.—*H. H. Remmers* (Purdue).

270. **Krieger, L., & McCall, W. A. Educational tests.** *Psychol. Bull.*, 1927, **24**, 409–417.—A review of 57 titles. In the past year there has been a marked development in measuring school achievement along several lines. New tests have been devised, especially in music; and the demonstration of tests has made strides in applying their results to teaching, and in combining them with intelligence tests both for educational surveys and for individual diagnosis. Some suggestions have been made as to the evaluation and improvement of existing tests.—*J. F. Dashiell* (North Carolina).

271. **Lincoln, E. A. Beginnings in educational measurements.** (2d rev. ed.) Philadelphia: Lippincott, 1927. Pp. 159. $1.60.—*R. R. Willoughby* (Clark).

272. **McGeoch, J. A., & Whitely, P. L. The reliability of the Pressey X-O tests for investigating the emotions.** *Ped. Sem.*, 1927, **34**, 255–270.—Three groups of sophomores, about equally divided as to the sexes, were given the X-O tests, Form A, originally and then again after 48 hours, 45 days, and 90 days, respectively; and coefficients of correlation were computed for each group between the results of original and repeated tests. For the affectivity scores on the four parts of Form A coefficients varied between 0.820 and 0.867, when the two tests were given 48 hours apart; and they decreased somewhat as the time interval was lengthened. For the idiosyncrasy scores on the four parts, coefficients varied between 0.426 and 0.770 with the 48 hour interval, decreasing on three of the parts with the longer intervals. For the classification schemes in parts 1 and 4, coefficients ranged from 0.737 to 0.899, decreasing irregularly

with the longer intervals. The progressive change in constancy of test scores with longer intervals points to changes in emotional organization due to alterations of stimulating conditions in the individual's life.—*J. F. Dashiell* (North Carolina).

273. **Nelson, M. J., & Denny, E. C. The Terman and Thurstone Group Tests as criteria for predicting college success.** *School & Soc.*, 1927, **26**, 501–502.—There were ascertained the correlations between various measures of scholastic success and the following intelligence tests: Terman Group Test of Mental Ability, Form A and Form B, and the Thurstone Psychological Examination, Form IV. The subjects for the major part of the study were 220 students from the Iowa State Teachers College. It is concluded that the two tests are fairly satisfactory for prognosticating success in the introductory course in psychology, the Terman test being the better tool, however. For predicting ability to handle other courses the tests are decidedly mediocre but give results at least comparable to those obtained on most tests requiring a longer time.—*H. L. Koch* (Texas).

274. **Pintner, R. Intelligence tests.** *Psychol. Bull.*, 1927, **24**, 391–408.—A review of 150 titles. Thorndike's *Measurement of Intelligence* is called "the most significant contribution to our subject since the work of Binet." Other books and articles in the general field are grouped, according as they bear upon the defining of intelligence, the relation between it and speed, statistical technique, the influences of heredity and environment, and the results of retests. Scale construction has been attempted with several types of tests, especially with the performance type. Group tests have been studied, less in the provision of new tests than in the construction of norms. Distributions of test results have been published for school children, for feeble-minded, for delinquent, and for different races; also correlations of test results with physical measurements, physiological conditions, personality ratings, etc. The problem of intelligence tests for college students has had its share of attention.—*J. F. Dashiell* (North Carolina).

275. **Pintner, R. Non-language tests in foreign countries.** *School & Soc.*, 1927, **26**, 374–376.—The main burden of the article is a complaint concerning the paucity of truly significant material on racial differences of a mental sort. It is alleged that until non-verbal tests are used and population samples are taken from racial groups in their native lands little will be accomplished toward the solution of the problem. Some figures are presented on Belgian children (from the vicinity of Brussels) tested by means of the Pintner Non-Language Mental Test. The Belgian and American norms parallel each other closely.—*H. L. Koch* (Texas).

276. **Pintner, R. A new intelligence test for survey purposes.** *Teach. Coll. Rec.*, 1927, **29**, 18–23.—A test using four conventional types of material—opposites, analogies, number sequence, and classification—and designed as "a very short test reliable enough for survey purposes and at the same time simple and unambiguous scoring." The scoring is found to reduce the time and errors considerably. Reliability of class scores is .82 or higher, and for two forms combined, about .90 or higher. An individual's score on one form has a reliability of about .78, on two forms combined about .88. Correlations for an age group with other standard intelligence tests are about .75 for one form, .80 for two forms.—*H. H. Remmers* (Purdue).

277. **Slocombe, C. S. Why the IQ is not, and cannot be constant.** *J. Educ. Psychol.*, 1927, **18**, 421–423.—Baldwin and Stecher's correlations of scores made by pupils in successive years are examined. There is found a comparatively low correlation between tests far apart in years and a high correlation between tests given near together. The tetrad difference formula of Holzinger and Spearman is then applied. This computation shows great differences at the extremes

(5 P.E.) which are due to high intercorrelation of early tests and of late tests but low correlations between early and late tests. It is thus inferred that the factors responsible for these differences are not the same.—*A. M. Jordan* (North Carolina).

278. **Stutsman, R. Performance tests for children of pre-school age.** *Genetic Psychol. Monographs,* 1926, **1**, 1–67.—Attempt at standardization of mental tests for the pre-school child at the Merrill-Palmer School. The tests used were colored cubes which were to be fitted into a box, nesting four hollow cubes, the Wallin peg boards, repetition of words and groups of words, answers to simple questions, buttoning strips of cloth, cube pyramid tests, Seguin form board, picture puzzles, Woodworth and Wells action agent association test, Montessori pink tower, mare and foal picture completion, Pintner-Paterson manikin test and the Decroly matching game. The results are presented in the form of decile tables, standardized on the basis of six month age intervals.—*M. Meenes* (Lehigh).

[See also abstracts 24, 35, 179, 234, 239, 255.]